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From a cultural to a distributive issue: Public climate action as a new field for comparative political economy

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Abstract

This article reviews recent insights from the blooming Comparative Political Economy (CPE) literature on climate change with the aim to demonstrate the importance of integrating climate change into the field of CPE and to highlight the contributions of CPE to our understanding of the social and political obstacles to effective climate policies. In addition, we advance two key points to bring the CPE literature forward. To tighten the dialogue between the "electoral politics" and "interest group politics" approaches, we propose understanding climate politics as a triadic conflict between losers of climate change, losers of public climate action (PCA), and winners of PCA. Second, we argue that the scope of CPE studies needs expansion. While existing CPE literature predominantly focuses on climate change mitigation, it is essential to consider climate change adaptation due to its significant distributive implications at the macro- and micro-levels of societies.

Keywords: climate change adaptation, climate change mitigation, comparative political economy, electoral politics, interest group politics.

1. Introduction

Climate change represents a fundamental challenge to humankind. While our understanding of the causes and implications of climate change have greatly improved, our understanding of the political obstacles to effective public climate action (PCA) has only recently started to grow thanks to social sciences efforts. This article critically reviews recent insights from Comparative Political Economy (CPE) on the politics of climate change with the aim of demonstrating that climate politics should become and is becoming a core field of CPE. In the earlier political science literature, mainly from International Relations, the global failure to enact effective climate action[1] to combat climate change was conceptualized as a problem of collective action (for a review see Bernauer, 2013; Fankhauser et al., 2015; Knill et al., 2010). Where climate change entered national political competition, it was considered a valence issue, driven by normative value dispositions (see Kitschelt, 1994; Kriesi et al., 2008). More recently, however, scholars came to understand PCA more and more as a problem of domestic policy-making with distinct domestic distributive implications. Successful climate policy-making requires not only international cooperation but also national support coalitions that will enable governments to enact the necessary reforms (Aklin & Mildenberger, 2020; Colgan et al., 2021; Harrison, 2010).

Conceptualizing climate change as a long-term challenge with distinct distributive implications for national economies and social actors opens the stage for CPE to engage with climate change. As a distinct mega-theoretical perspective, CPE recognizes the fundamentally distributive nature of PCA, not only between but also *within* countries. That insight applies to the phenomenon of climate change itself but also to PCA. A CPE perspective is also valuable because—in contrast to approaches that place the responsibility for change on individuals or the economy—CPE emphasizes the state's key role in starting and steering the transition to a de-carbonized world. Hence, climate change has become part of "normal" politics on which CPE has the expertise to comment.

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In light of these arguments, it does not surprise that two literature strands have developed within CPE to make sense of the political challenges behind climate politics: The *electoral politics* (EP) literature explores the electoral dynamics around climate change, and the *interest group politics* (IGP) literature examines the role of organized interests in climate policy-making. While IGP emphasizes the relevance of business and interest groups' pressure for policy change, EP sees policy change as driven by public opinion and party competition dynamics. Causal primacy for changing party behavior on a specific policy field is argued to be found in long-term structural social and economic changes (e.g., Beramendi et al., 2015; Manow et al., 2018). These changes alter the electorate's composition, interests, and preferences, which in turn causes parties to enact policies in line with these preferences, either for representation or fear of electoral push back. For IGP scholars, in contrast, politics are "organized combat" (Hacker & Pierson, 2010), where organized interests have the capacity to make a difference—much more than atomized voters. The IGP literature investigates the various links of (governing) parties to interest groups (Hertel-Fernandez, 2019; Klüver, 2020). The literature pays attention to business interest groups which enjoy privileged influence on policy-making (Culpepper, 2011, 2015; Culpepper & Reinke, 2014; Kalaitzake, 2022; Poulantzas & Miliband, 1972).

This article reviews recent insights from these two blooming CPE literatures on climate change, aiming to emphasize the importance of integrating climate change into CPE and to highlight CPE's contributions to understanding the political obstacles to effective climate action. We advance two key points to bring the CPE literature forward. First, we propose conceptualizing climate politics as a triadic conflict among losers of climate change, losers of PCA, and winners of PCA to tighten the dialogue between "electoral politics" and "interest group politics" approaches. Second, we argue for expanding the scope of CPE studies. Even highly ambitious mitigation efforts will not prevent temperatures from rising by an additional 0.5 to 0.8°C by the end of the century compared to current temperatures (Bellon & Massetti, 2022). Societies and individuals will need to build ex-ante resilience to a warmer and more irregular climate which has massive distributive implications at both macro and micro levels of societies. We therefore argue that it is crucial to consider climate change adaptation as part of PCA.

We start from the premise that the understanding of climate politics as a domestic distributive conflict applies to both the phenomenon of climate change and PCA. Not only PCA, but also climate change itself has massive distributive consequences when warmer temperatures or extreme weather events change the material circumstances of the population or affect the business models of economic actors. We therefore conceptualize climate politics as a two-dimensional conflict space with climate change on the horizontal axis and the distributive conflict around PCA on the vertical axis. This conceptualization should tightens he dialogue between "electoral politics" and "interest group politics" approaches as the two literatures focus on different conflict axes within climate politics, as visualized in Figure 1. Both literatures are concerned with *climate action losers*,[2] that is, actors vulnerable to costs of climate action, but pair them with different adversaries. The EP literature conceptualizes climate politics as a conflict between these losers of climate action and losers of climate change itself (Gaikwad et al., 2022). *Climate change losers* refer to actors that are vulnerable to a changing climate, for example, individuals living in coastal or already arid areas, companies with property at risk of flooding, or those generally holding "climate vulnerable assets" (Colgan et al., 2021). Based on self-interest, these actors should support ambitious PCA. IGP scholars study climate action losers as well but pair them with *climate action winners*, which are particularly relevant in the literature on policy feedback effects in climate politics (Aklin & Urpelainen, 2018; Meckling et al., 2015). Climate action winners are mostly found in low-emissions technologies. For example, firms and workers invested in renewable energy production, electric vehicles, and the battery supply chain fall under this category. Climate action winners should also support PCA, but their support is based on the distributive implication of the policy itself. Remains the idea of *climate change winners*. As of today, the group of climate change winners remains largely conceptual and speculative (see, for instance, Craig, 2013; Ruhl, 2012). Absolute and relative distributive wins are to be expected due to the uneven geographical impact of climate change. For example, as the Mediterranean region becomes a less attractive tourist destination because of more frequent and intense wildfires, the Baltic Sea and its tourism industry might profit. Similarly, wine yields in England are increasing, and upward pressure on suitable land prices is already being felt (Speed, 2023). However, so far we have no evidence that potentially winning from climate change affects actors' preference formation or political behavior, which is why this group will not feature prominently in our article.

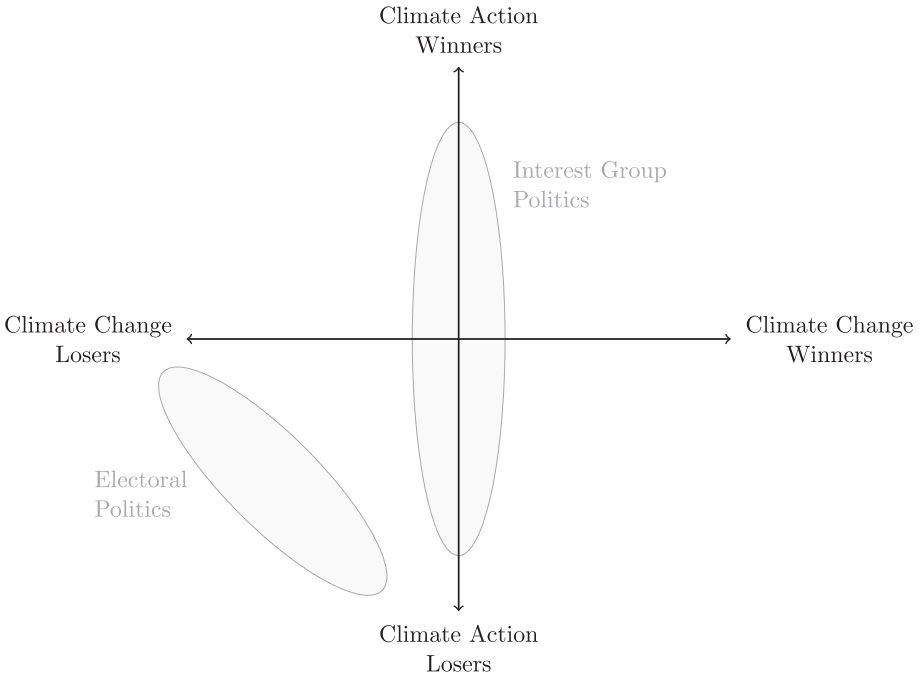

Figure 1 Analytical framework of the two-dimensional climate politics conflict space. The political conflicts that electoral politics and interest group politics literature focus on are marked in gray.

We regard the focus on different conflict axes as the main explanation for the lacking connection between the two strands of the literature. Our analytical framework helps to make current differences in both strands more explicit and to overcome the disconnect by proposing a triadic conflict structure between climate change losers, climate action winners, and climate action losers. Previous attempts to integrate EP and IGP literature include Finnegan (2022). Because climate policy is a long-term investment where today's costs yield future benefits, policy-makers fear political backlash from policy losers through electoral and interest group politics. While Finnegan explains cross-country climate policy variation by institutional settings moderating such backlash, we step back to identify the underlying political conflict around climate action. This involves identifying social forces driving and hindering these policies. Although Finnegan successfully distinguishes and integrates electoral and interest group politics into a theoretical framework, he does not address why policy-makers are incentivized to tackle climate change, and we do see some progress in the implementation of PCA. In contrast, we view climate politics as governments facing increased pressure *against and for* PCA through electoral and interest group channels. This addition is crucial as climate change impacts voters and businesses more directly, and the relevance of adaptation grows.

In our view, a triadic conflict structure would benefit the literature in three ways. First, it allows EP scholars to turn their attention to support for climate action that is not born out of climate change vulnerability but instead out of *direct benefits individuals would receive from public climate action*. Here, we think specifically of policies such as the Austrian "climate income" or large-scale attempts to prepare cities to manage climate change effects. Another way citizens benefit from PCA is in their function as producers of labor rather than voters alone. Although the renewable energy industry reached 12.7 million employees in 2021 globally (IRENA and ILO, 2022) with numbers only expected to increase, low-emissions employment's effects on political preferences and behavior is a blind spot in the EP literature. Its focus on voters as consumers has stood in the way of conceptualizing voters as producers. Second, the IGP literature has a blind spot when it comes to climate change losers. This is curious as much economic activity relies on stable climatic conditions. Therefore, interest groups in tourism, agriculture, forestry, and fishery should all be highly concerned about climate change and doing business in an increasingly climatic-extreme world. We attribute this blind spot to the literature's focus on the energy sector. Oil and gas can famously be extracted offshore and in deserts, and the same is true for renewable energy sources.[3]

If IGP literature takes the climate change loser pole seriously, it would be possible to construct cross-pressure between the two conflict axes, an area currently under-researched. Third, a shared framework allows both strands of literature to enter into dialogue, which we regard as a fruitful avenue for further research. For instance, research into cross-pressured groups and the dialogue between the two fields can greatly advance our understanding of reform conditions and support coalitions for ambitious climate change mitigation and adaptation.

Two comments on the scope of the paper: While much of the interest group politics literature focuses on the *renewable energy transition*, the electoral politics literature is more broadly concerned with *public climate action* as such with renewable energy transition being one specific policy field. We therefore discuss the specific arguments of the IGP literature on renewable energy transition where we deem them applicable for climate change mitigation (CCM) in general. With regard to the geographical scope of the review, we focus on research on PCA in the early-industrialized, high-income democracies of Europe, North America, and Oceania. Historically, these countries are responsible for the majority of GHG emissions and have among the highest emissions per capita today. These countries are expected to lead the transition to low-emissions economies. These are also the countries for which the CPE expertise is most developed, both generally and with regard to the political and economic dynamics around climate change.

The article is structured as follows: First, we discuss the electoral politics literature on climate change (Section 2), and the interest group politics literature (Section 3) with the aim to review the main insights of the literatures but also to outline further research strategies to advance our understanding of the challenge of fighting climate change. After that, we call for an extension to the literature. In Section 4, we therefore argue that adaptation is becoming a major field of PCA, and the literature should be ready to tackle it. The final section concludes (Section 5) this paper.

2. Insights from the electoral politics literature on climate change

As with many other contested issues, public opinion and the preferences of specific electorates inform parties and, consequently, governments' positions on climate change. We start by discussing scholarly knowledge on attitudes and preferences toward both climate change and PCA, as well as the most important factors in shaping these preferences (Section 2.1). We then discuss how climate change attitudes affect public policy-making through the channel of democratic representation and the channel of retrospective voting (Section 2.2). Finally, Section 2.3 discusses the polarization of climate change as a political issue in party competition and the association between climate skepticism and far-right voting.

2.1. Mass attitudes toward climate change and public climate action

As a broad phenomena, climate change is fairly uncontested in advanced democracies: With notable exception of the United States, only a minority of the population in advanced democracies holds skeptic *climate beliefs* of any kind (Lübke, 2022; Poortinga et al., 2019).[4] Attitudes and preferences start to polarize once we turn toward concrete policy proposals on how to deal with climate change. While an earlier literature on social movements and left-libertarian parties considers attitudes toward the environment and the climate as an expression of cultural value or ideological dispositions (Inglehart, 1995; Kitschelt, 1994; Kriesi et al., 2008; Meguid, 2005),[5] CPE stresses the distributive implications of climate policies and consequently the importance of *material self-interest* for climate policy preferences. Here, CPE's focus on PCA's cost/benefits distribution is most informative. Individuals form their preferences based on a rational assessment of the costs and benefits of different policy options—those fearing income losses through a specific policy ("policy losers") opposing the policy, those benefiting from the policy ("policy winners") supporting it (Bechtel et al., 2019; Bush & Clayton, 2023; Coleman et al., 2023; Gaikwad et al., 2022).

Implicitly or explicitly, self-interest is conceptualized as economic vulnerability, both in terms of cost-exposure to climate policies (for instance, working in a carbon-intensive industry) or to climate change itself (for instance, living in a low-lying coastal community). The drivers of that sensitivity to the material costs of a policy depend naturally on the specific policy. Individuals are for instance more likely to oppose carbon taxes if they own a car (Baranzini & Carattini, 2017; Carattini et al., 2017; Thalmann, 2004) or live in rural communities with

fewer transportation alternatives to personal vehicles (Harrison & Peet, 2012; Kallbekken et al., 2017; Kallbekken & Salen, 2011), while those working in emission-intensive industries are generally more skeptical toward climate change mitigation policies (Arndt et al., 2023; Bechtel et al., 2019; Gaikwad et al., 2022). Apart from factors that shape vulnerability directly, income, education, (young) age, and (female) gender are also associated with higher support for carbon or other environmental taxes (Arndt et al., 2023; Lépissier et al., 2022; Rotaris et al., 2019; Thalmann, 2004). In addition, political trust has been shown to influence climate policy attitudes in (at least) two ways: political trust affects the translation from climate concern to specific climate policy preferences (Davidovic, 2023; Fairbrother, 2017, 2019; Jagers & Hammar, 2009). Closely related to political trust, beliefs about the state's effectiveness in economic management, or its credibility to deliver its promises impact attitudes toward climate change policies (Mares et al., 2024). The relevance of political trust stands to reason given the uncertainty of future pay-offs of climate policies at the moment of implementation and the problem of agency loss (Gazmararian & Tingley, 2023; see Garritzmann et al., 2023 for a similar argument with regard to social investment policies; see Koreh & Mandelkern, 2023 for a discussion of states' environmental, social, and market credibility).[6]

A second defining feature of climate policies is the spatial dimension of the cost/benefit distribution of climate policies (Arndt et al., 2023; Stokes, 2016). Therefore, while climate policies may receive broad support from the general population, they are also likely to receive concentrated opposition from—often rural—communities where local costs manifest. As policies with diffused benefits but concentrated costs tend to generate the strongest political resistance, climate politics is often characterized by numerically small but strongly mobilized and organized opposition to a specific climate policy. By contrast, support for a policy increases when costs are broadly shared (see Coleman et al., 2023; Wilson, 1980) or when policy losers, in particular low-income groups, are compensated for their material losses (Carattini et al., 2019; Dolsak et al., 2020; Fremstad et al., 2022; Mares et al., 2024).

To increase support for climate policies in particular but not exclusively among low-income voters, high hopes also placed on redistributive climate policies such as climate income. Because of their redistributive effect, these policies have the potential to create policy winners among those who emit little emissions but gain from the lump sum redistribution. Survey experiments (Beiser-McGrath & Bernauer, 2019; Carattini et al., 2019; Dolsak et al., 2020; Fremstad et al., 2022) show that carbon taxes are less contested (in particular among lower income groups) if their revenues are "recycled" to the population in the form of lump sum rebates or a reduction of income taxes. The extent to which this experimental evidence translates into political reality is still a subject of investigation, presumably because it is far from clear that the mechanisms by which such taxes work are understood or believed by a substantial share of the population (Stadelmann-Steffen & Dermont, 2018).

Now, as climate change's impacts are being felt, the non-action of governments also entails material costs (see the vertical axis of Fig. 1). Climate change is increasingly and visibly endangering the health, physical safety, food security, and displacement risks of individuals and communities (Otto et al., 2017; Tegat et al., 1990). Colgan et al. (2021), for instance, conceptualize climate change as a process that alters the value of "climate-vulnerable" assets such as property in low coastal areas over time, making their holders supportive of CCM policies. To add complexity to the analyses of climate preferences, the objective climate-related vulnerabilities are one step in the analysis—a second one is whether citizens are aware of their vulnerabilities. That analytical step is often overlooked in CPE models of preferences formation (for instance, until quite recently, in the study on the political implications of inequality, cf. (Meltzer & Richard, 1981), or the Open Economy politics paradigm (cf. Lake, 2009) but is particularly relevant in the context of the uncertain consequences of climate change (Gazmararian & Milner, 2023b)).

For self-interest to translate into preferences and political action, citizens must be aware of their vulnerability to climate change/policies. Among the factors that affect such concerns, the literature has identified exposure to extreme weather events and partisanship as important factors. An emerging literature asks whether exposure to extreme weather events or climate-related natural disasters increases support for progressive climate policies by raising concern with climate change. Exposure to such events might help individuals better gauge the otherwise abstract risks related to climate change (Weber, 2016). The argument is that direct experience of extreme weather events enhances the mental accessibility of climate change to citizens (Demski et al., 2017; Howe, 2018; Taylor et al., 2014), increases their emotional attachment to climate change (Leiserowitz, 2006; Zaalberg et al., 2009), and reduces the perceived temporal and spatial distance of climate change ("it is happening here

and now," Brügger et al., 2015; Hazlett & Mildenberger, 2020; Spence et al., 2012). Studies have found that voters who have experienced wildfires, heatwaves, or floods (Baccini & Leemann, 2021; Hazlett & Mildenberger, 2020; Rüttenauer, 2023), are significantly more likely to show support for climate policies, even if these policies inflict personal costs. Yet, findings remain inconclusive. Not only is experiential learning contingent on prior beliefs (with climate skeptics being least likely to update their beliefs, see Gazmararian & Milner, 2023b) or partisanship (Garside & Zhai, 2022; Hamilton et al., 2016; Hazlett & Mildenberger, 2020; Hilbig & Riaz, 2024). Note that there is a strong correlation between partisanship and climate skepticism, particularly in the United States, so the two arguments can empirically not always be clearly distinguished. Other studies also find no or only transient effects of exposure to extreme weather events for climate concern (Brulle et al., 2012; Hilbig & Riaz, 2024; Mildenberger & Leiserowitz, 2017), policy preferences (Brody et al., 2008; Konisky et al., 2016) or behavior (Hilbig & Riaz, 2024). In a review of 73 studies on the link between extreme weather events and climate opinion, Howe et al. (2019) relate the inconclusiveness of previous studies to different study designs, in particular measurement issues and causal identification strategies, but state an overall positive, albeit weak link between the two phenomena. Yet, this literature also shows that PCA also offers options for credit-claiming, mainly in the form of relief packages after natural disasters. With relief packages representing a form of compensatory adaptation, this literature is one of the few literatures concerned with the electoral impact of (compensatory) adaptation policies. It shows that incumbent parties can get substantial electoral support for efficient first aid and relief packages. However, the effects are typically short-lived (see Gasper and Reeves (2011) for evidence from the United States, see Baccini and Leemann (2021), Bechtel and Hainmueller (2011), and Valentim (2021) for European evidence). A recent study by Birch (2023) finds that parties are also electorally rewarded for changing their climate position in the aftermath of a natural disaster.

The conceptualization of self-interest as vulnerability emphasizes the multi-dimensionality of climate preferences: As individuals can be vulnerable to both climate change and climate policies, we might expect actors to clash over policies depending on their climate change vulnerability (see Fig. 1) and their climate policy vulnerability (Colgan et al., 2021; Gaikwad et al., 2022). Some social groups might even be cross-pressured when individuals susceptible to the costs of climate policies also face physical threats by climate change itself. As a further source of cross-pressure, climate policies can be targeted at individuals or the local community. Cross-pressured social groups might support both fiscal transfer to vulnerable individuals and protection of infrastructure to shield communities from further harm (Gaikwad et al., 2022). One of the questions that follows from such cross-pressures pertains to the *priorities* that individuals (and subsequently policy-makers) attribute to these kinds of policies, particularly when policy choices are presented as trade-offs.

2.2. The electoral relevance of climate attitudes

Public opinion affects policy-making through two channels: the channel of *democratic representation* and the channel of *retrospective voting*. We start with discussing existing work related to climate change on the first channel. The basic logic of democratic representation emphasizes parties' function as representatives of their constituencies. As citizens base their vote choice on their attitudes regarding climate change, these attitudes influence the partisan composition of the government, which implements policies in line with the preferences of its constituencies. The link between public opinion and parties is reinforced by the latter's incentives to appeal to new electoral constituencies—particularly relevant in times of declining party loyalties—with new, popular policies. A second channel of influence follows the *logic of retrospective voting*. Here, the argument goes that public opinion on climate change affects policy-making because the incumbent party or party coalition is punished for implementing costly CCM policy (Lüth & Schaffer, 2022; Schaffer & Levis, 2022; Stokes, 2016; Tresch et al., 2020). Therefore, public opinion represents a latent veto point for future-oriented reforms, i.e., reforms that imply immediate costs and future returns. As in the original formulation of the economic voting argument (Duch & Stevenson, 2010; Lewis-Beck & Stegmaier, 2019) and the literature on welfare state reforms (Huber & Stephens, 2001; Pierson, 2001), the argument is bare of partisan politics: Parties are argued to be punished for implementing costly policies or rewarded for beneficial programs independently of their ideological orientation.[7]

But electoral punishment is not universal. Retrospective voting is argued to be more problematic for governing parties in majoritarian systems when spatially concentrated cost-bearing constituencies make

punishment more costly for the incumbent party (Finnegan, 2023; Harrison, 2010; Harrison & Sundstrom, 2010). Stokes (2016), for instance, finds that the implementation of wind turbines in Ontario, Canada, caused the incumbent liberal party to lose 4–10 percentage points in affected precincts, a decisive margin in a majoritarian system, while Henriks et al. (2023) find no lasting effect of the implementation of climate policies on electoral support for incumbent parties in the proportional system of Sweden (see also Eldemerdash et al. (2023) on how climate change induces more social unrest in majoritarian systems).

A second conditional factor is the timing of the policies' implementation within the policy cycle. This argument goes back to Nordhaus (1975), who argues that incumbent governments will boost economic growth and lower unemployment in pre-election periods to maximize their chances of re-election. With regard to climate change, Fankhauser et al. (2015) find a negative interaction effect between a democracy variable and election year on the passage of climate legislation and therefore argue that "climate legislation is not generally seen as a vote winner" in democracies. Equally, the election year is found to exert a negative influence on the growth of renewable energy shares (Aklin & Urpelainen, 2013), the level of fossil fuel taxation (Finnegan, 2023) and the likelihood of ratifying an international environmental agreement (Cazals & Sauquet, 2015). Contrary to these studies, Schulze (2021) finds in a cross-national times series analysis of 29 advanced democracies that CCM policies tend to be implemented as an election gets closer, mainly because "soft" policies with diffused cost concentration seem to be particularly popular among governments on the onset of an election. Introducing hard policies might even create a political backlash when a significant number of political actors try to repel the policies even through extraordinary means outside established norms and procedures (Patterson, 2023). Gainza and Montes-Nebreda (2023) add that the environmental performance, but also the perceived effectiveness of the policy, a climate of political trust, and the provision of participation mechanisms matter for the electoral costs of climate policies.[8]

In terms of party competition, we clearly observe a polarization around climate change, mainly driven by the far-right (Boecher et al., 2022) and most pronounced in the Anglo-Saxon countries. Far-right parties take the role of climate deniers independent of party competition as we find it in the Anglo-Saxon two-party systems (Carter et al., 2018; Huber, 2022; Tranter, 2011) as well as in the European multi-party systems (Carter & Little, 2021; Forchtner & Lubarda, 2023; Ladrech & Little, 2019; Oswald et al., 2021; Żuk & Szulecki, 2020). The increasing polarization of CCM is reflected in the preferences of the respective electorates: Climate skepticism is strongly associated with voting for the far right (Kulin et al., 2021; McCright et al., 2016), also because the far right creates an atmosphere of denial of climate change, anti-elitism and anti-green sentiments that is inimical to PCA. On the other hand, the political polarization around climate change benefits not only the far-right but also progressive left parties, most clearly green parties (Ćetković & Hagemann, 2020; Otteni & Weisskircher, 2022).

Despite the clear polarization around climate change on the level of party competition, the evidence of a partisan effect on climate-related policies is mixed. Some evidence suggest that left governments, and governments with green participation in particular, enact more pro-environmental policies than other governments (Abou-Chadi, 2016; Carter et al., 2018; Jahn, 2022; Neumayer, 2003; Schulze, 2021; Spoon et al., 2014; Tobin, 2017), but other scholars find no effect of government composition on investment in clean energy (Aklin & Urpelainen, 2013), climate legislation (Fankhauser et al., 2015), the stringency of such policies (Finnegan, 2022; Rafaty, 2018) or the level of fossil fuel taxation (Finnegan, 2023). Finnegan attributes the lacking partisan effect to the relevance of political institutions such as the electoral system or corporatist structures that shield any government from electoral pressure (a point to which we will return later) while Mildenberger (2020) explains the lack of a partisan effect on climate policies by the double representation of polluting interest groups among both left and right-wing representatives.

To conclude, ambitious PCA seems to be electorally more feasible in countries with proportional electoral systems where governments are shielded from electoral pressure or when costly policies are implemented early in the electoral cycle. We also have evidence that compensatory measures and a climate of political trust can mitigate the electoral blow for incumbent parties (Bolet et al., 2023; Gainza & Montes-Nebreda, 2023). The literature on the political consequences of natural disasters shows that PCA also offers options for credit-claiming, mainly in the form of relief packages after natural disasters. With relief packages representing a form of compensatory adaptation, this literature is one of the few literatures concerned with the electoral impact of adaptation policies. It shows that incumbent parties can get substantial electoral support for efficient first aid and relief packages.

However, the effects are typically short-lived (see Gasper & Reeves, 2011 for evidence from the United States, see Baccini & Leemann, 2021; Bechtel & Hainmueller, 2011; Valentim, 2021 for European evidence). A recent study by Birch (2023) finds that parties are also electorally rewarded for changing their climate position in the aftermath of a natural disaster.

Still, that does not answer the question of whether parties can turn "vice into virtue" (Levy, 1999) and be electorally rewarded for implementing effective CCM. Our knowledge on that question is still developing, but we point to three lines of arguments: High hopes are placed on compensatory measures, in particular large-scale redistributive climate policies as the climate income (carbon fee and dividend) that would reward sustainable behavior of citizens materially. These policies are argued to reduce the costs associated with the policies to citizen. At least theoretically, the policy allows for "policy winners" among those who produce little emissions but gain from the lump sum redistribution increasing thereby the support coalition of ambitious PCA. Survey experiments (Beiser-McGrath & Bernauer, 2019; Carattini et al., 2019; Dolsak et al., 2020; Fremstad et al., 2022) show that carbon taxes are less contested (in particular among lower income groups) if their revenues are "recycled" to the population in the form of lump sum rebates or a reduction of income taxes. The extent to which this experimental evidence translates into political reality is still a subject of investigation.

Second, the electoral feasibility of ambitious climate policies depends on the role of political parties as political mobilizers and communicators. From the welfare state research, we know that parties might be able to turn seemingly unpopular reforms into an exercise of credit claiming under a set of specific conditions: high credibility of the party that allows the party to frame the reform as a necessity rather than an ideological project as long as no credible contender challenges the party's discourse (Kitschelt, 2001; Ross, 2000). It also means that active re-framing and communication by the party is needed (Green-Pedersen, 2002). The literature on party cues is another strand of research that points to the reverse direction between public opinion and party positions. Parties influence voters' opinions via party cues, that is, information about the parties' positions on specific policy issues (Leeper & Slothuus, 2014). While the research on the effectiveness of party cues discusses the limits of party cues in case of detailed knowledge or strong beliefs about the issue (Boudreau & MacKenzie, 2014) or perceived party polarization (Linde, 2020; Mildenberger & Leiserowitz, 2017; Stöhr, 2022), the research nevertheless evidences that voter opinions are indeed swayed by the position of their party (Goren et al., 2009; Leeper & Slothuus, 2014), because voters use cues from their favorite party as cognitive short cuts to make decisions in a low information context (Cohen, 2003; Conover & Feldman, 1989; Popkin, 1991) or form opinions in line with their affect-oriented attachments to parties (Iyengar et al., 2019; Lodge & Taber, 2013). With regard to climate change, scholars have recently begun to explore the role of party elite cues on climate skepticism (Brulle et al., 2012; Carmichael & Brulle, 2017; Guber, 2013; Tesler, 2018), focusing primarily on cues from voters' favorite party but recently also on the out-group party which takes the form of a backlash to out-party elites (Merkley & Stecula, 2021). Less is known about the relevance of party cues on concrete policy proposals. Yet, research on party cues suggests that when personal self-interest—as in the case of PCA—is at stake, party cues do not prompt citizens to go against their material self-interest but might temper the pursuit of self-interest by moderating the most extreme policy demands (Slothuus & Bisgaard, 2021).

Lastly, the literature on policy feedback (Béland et al., 2022; Campbell, 2012; Pierson, 1993) points to a quite distinct way in which political parties shape political opinions. Feedback mechanisms are a prominent argument in the IGP literature, but public policies impact not only the preferences and power of interest groups (see our discussion in Section 3.4) but also of ordinary citizens. As part of the government, parties implement policies that then impact public opinion by altering voters' self-interest and personal experience, by making the material stakes of voters in public policy more or less visible, and by sending interpretive messages (Béland et al., 2022; Pierson, 1993). Little is known about the feedback effects of climate policies on public opinion empirically, but Montfort et al. (2023) demonstrate that policy sequencing, the strategic and temporal introduction of less costly ("soft") policies first, can increase the support for ambitious climate policies at a later point. High hopes are also placed on redistributive climate policies such as climate income, which are hoped to increase support for ambitious climate policies once citizens, and in particular low-income citizens, see the beneficiary effect of a high carbon tax on their disposable income.

2.3. Party competition around climate change mitigation

Despite the ongoing discussion about the partisan effect of government composition on climate policy, evidence is accumulating that climate change enters party competition, and positions become increasingly polarized also on the level of political parties. The main argument of the earlier literature on party competition around the environment and climate considered climate change as a valence issue, that is, a consensus issue with parties competing on competence and trying to influence the issue's salience.[9] Today, research provides mostly evidence for an accommodation strategy among mainstream parties, particularly among the mainstream left as a reaction to the entry of green parties in national party systems (Cadoret & Padovano, 2016; Carter & Little, 2021; Farstad, 2017; Ladrech & Little, 2019; Meguid, 2005; Tobin, 2017), although they tried to downplay green issues initially (Abou-Chadi, 2016). More recently, the polarization of CCM seems increasingly driven by the far-right. Both qualitative and quantitative evidence suggest that the far-right either downplays the existence of climate change (Boecher et al., 2022) or the anthropogenic nature of that process (Vihma et al., 2021). Notably, far-right parties take the role of climate change deniers independent of party competition as we find it in the Anglo-Saxon two-party systems (for the United States: McCright et al., 2016; for Australia: Tranter, 2011; for the UK: Carter & Little, 2021; Huber, 2022) as well as in the European multi-party systems (Carter & Little, 2021; Forchtner & Lubarda, 2023; Ladrech & Little, 2019; Oswald et al., 2021; Riedel, 2021). Otteni and Weisskircher (2021) show for Germany that the construction of wind turbines boosts the electoral support of both the Green Party as the biggest supporter of the renewable energy transition and their biggest opponent, the radical right.

The increasing polarization of CCM is reflected in the preferences of the respective electorate: Climate skepticism is strongly associated with voting for the far right (Kulin et al., 2021; Lockwood, 2018; McCright et al., 2016). From a cleavage perspective, the issue of CCM appears to be increasingly integrated into the transnational cleavage, the now dominant cleavage in most advanced democracies (Hooghe & Marks, 2018; Kriesi et al., 2008; Schwander et al., 2022). Despite recent advances, the link between the far right and opposition to concrete climate policy instruments remains under-explored. Why, for instance, is climate skepticism integrated into the transnational cleavage (Bayer & Genovese, 2020; Manow & Schwander, 2022; Otteni & Weisskircher, 2022; Reitz & Jörke, 2021)? After all, the protection of nature has a long tradition in conservative and nationalist ideologies (Forchtner, 2020). Recent studies suggest that opposition to CCM is related to anti-elitism (Aasen & Salen, 2022; Lockwood, 2018) and political distrust (Fairbrother, 2017), combined with skepticism toward the "mainstream" media or science (Huber et al., 2021). We see another possible explanation for the link between climate attitudes and far-right voting at the level of party competition: the link between the far-right and climate attitudes is tightening as a counter-reaction to the issue ownership of green parties. So far, however, there has been very little research on the question of the salience of the issue for far-right voters in general or the potential electoral gains for right-wing parties (but see Lüth & Schaffer, 2022; Otteni & Weisskircher, 2022).

3. Insights from the interest group politics literature on climate policy-making

Whereas EP literature is mainly concerned with losers and winners on the consumer side, we turn now to the producer side. The IGP literature in the realm of climate politics has experienced a similar mushrooming with a strong focus on the energy sector.[10] We discuss findings where we find them applicable to PCA in general. With regard to PCA, the IGP literature is primarily concerned with two types of questions. The first group of scholars focuses on the *process of interest groups' preference formation* intending to identify the dominant line of conflict and the actors with actual skin in the game. The second type of questions aims to explain *cross-national variation in policy outcomes*. The actions of interest groups and policy-makers, and how they interact with institutions are studied in this literature. We discuss the first type of question in the upcoming subsection (Section 3.1) and dedicate three subsections to mechanisms to explain cross-national variation. Section 3.2 discusses strategies interest groups apply to influence on policy-making. In the following subsection, we introduce the strategic portfolio with which policy-makers can respond and attempt to overcome policy opposition (Section 3.3). Finally, the distinct argument of policy feedback effects and how they allow policy-makers to apply a third strategy to overcome policy opposition—policy sequencing—is discussed in a separate section (Section 3.4). The mediating role of institutions is discussed throughout the three subsections.

3.1. Interest groups' preference formation

As a subfield of CPE, the IGP literature on climate action starts from the premise that organized interests' preference formation is guided by a rational assessment of policies' cost/benefit distribution. Business associations and labor unions are traditionally considered key actors in the literature. In recent years, more emphasis has been placed on the role of individual firms in policy-making (Hart, 2002; Kim, 2017). In climate politics, not least because of the diminishing power of unions in general, the literature focuses more on the business side (Boasson et al., 2022).

In climate politics, the main line of conflict among interest groups is sectoral: Opponents of climate action, often called policy losers or incumbent interest groups, are found in fossil fuel-based energy production, sectors with high energy consumption, and industries that generate emissions due to their physical and chemical processes, such as steel and cement production or livestock farming. Mitigation supporters, policy winners, or incoming interests are found in sectors that potentially profit from decarbonization efforts because they are in the business of low-emissions technologies and techniques, most prominently renewable energy production (wind, solar, hydro, geothermal, and, depending on the context, nuclear) or battery and electric vehicle production. Yet, GHG intensity is not the only factor determining policy preferences. Trade openness is an intercepting variable as it affects the extent to which costs can be handed down to consumers. Whereas GHG-intense sectors with little trade openness might pass costs on to consumers, those with high trade exposure face a competitive disadvantage from the costs imposed by CCM policy (Genovese, 2019).

Furthermore, sectors are not preference monoliths. First, the sectoral logic is intersected by a firm's concrete market position. Resistance toward CCM travels up and down the supply chain since industries upstream of the highest emitters fear demand plunges and downstream industries higher input prices (Cory et al., 2021). Additionally, intra-sectoral competition shapes firms' CCM preferences as they assess policy costs in relation to their competitors (Downie, 2017; Kennard, 2020; Vormedal et al., 2020). Second, the political context impacts firms' preference formation. As shown in the welfare state literature (Hacker & Pierson, 2002), business might support the second-best policy option to stop more ambitious climate policy proposals from passing (Genovese & Tvinnereim, 2019; Meckling, 2011; Vormedal & Meckling, 2023). Firms assess not only policy costs (Genovese & Tvinnereim, 2019) but also regulatory pressure (Meckling, 2015). For instance, Lerner and Osgood (2023) find evidence that publicly traded firms whose directors simultaneously govern companies engaged in a wide range of climate action are more likely to adopt pro-climate behaviors themselves. For labor unions, the role of political assessment is even more critical in preference formation because they find themselves cross-pressured between preventing job loss and upholding social norms that are generally more favorable to CCM, resulting in a jobs-versus-climate dilemma (Abraham, 2017; Kalt, 2021; Thomas, 2021). To navigate the dilemma, labor organizations developed the concept of *just transition* to ensure that the substantial benefits of a green economy transition are shared widely, including supporting those who stand to lose economically—be they countries, regions, industries, communities, workers, or consumers. The concept of just transition allows trade unions to politicize job losses without opposing renewable energy transitions (Jenkins et al., 2016; Newell & Mulvaney, 2013). Unions can work as intermediaries between the government and workers in emissions-intense industries and local communities. When unions help to reach just transition agreements which connect ambitious mitigation with compensation for policy losers, their involvement alleviates the electoral costs of CCM for governments (Bolet et al., 2023).

Until now, the literature has been focused on the costs and benefits attached to CCM. How climate change itself and the resulting costs impact interest groups' preferences and behavior is only just emerging as a field of research (Ausserladscheider, 2024; Gazmararian & Milner, 2023a). Agriculture, for example, is vulnerable to climate change because its harvest depends on stable climate conditions while its immense GHG emissions also make the sector vulnerable to CCM policy. The impact of the resulting cross-pressure on agricultural preference formation has not been studied yet. Another area of little attention is the mitigation supporting side of labor. We know little about the openness of legacy trade unions toward employees from low-emissions industries or about attempts to unionize those employees in separate organizations (but see Gazmararian & Tingley, 2023, p. 39). Finally, the dichotomous distinction in winners and losers of PCA is a simplification: Some industries are "convertible" (Kelsey, 2018) or "decarbonizable" (Kupzok & Nahm, 2024). Their current business model is dependent on emissions-intense practices, but they can transition to low-emissions technologies and even aim for a

first-mover advantage in emerging low-emissions markets. For them, CCM represents not only risks and costs but also new business opportunities (e.g., electric utilities, car manufacturers, steel, chemicals, etc.). Actors in those industries show more flexibility in determining their policy preferences—they can either side with the winners or the losers. Kupzok and Nahm (2024) argue that these actors can rapidly realign their strategic preferences when they perceive decarbonization as politically inevitable, push for the climate spending policies, and are partially responsible for the latest rise in green industrial policy (e.g., the US *Inflation Reduction Act* or the EU *Net-Zero Industry Act*). Too little is known about this class of actors and what determines their climate policy preferences and coalition-building behavior.

3.2. Interest groups' strategies of influence

Once interest groups have formed a policy preference, they must find effective ways to influence the policy-making process. They must decide with whom to collaborate, whom to influence, and how to influence. First, economic actors aggregate their preferences in the political process when they build advocacy coalitions. Not surprisingly, business actors have been shown to lobby at different levels of aggregation: as individual firms, in ad-hoc coalitions, or long-standing sectoral and umbrella associations (Meckling & Nahm, 2018b). Similarly well-known from other policy fields is the emergence of cross-class coalitions (for climate politics, see Abraham, 2017; Mildenberger, 2020; Thomas, 2021; for the welfare state, see Hall & Soskice, 2001; for labor market dualization, see Palier & Thelen, 2010; Rueda, 2007). Mildenberger (2020) argues that those cross-class alliances are essential for opposing interest groups to defend their interests. The cross-cutting nature of climate politics, the fact that opposing and supporting interest groups are found on both sides of the class divide, leads to a *double representation* in politics as each government, whether left- or right-leaning, is linked to interest groups on both sides of the climate issue. However, because of politics' status-quo bias, double representation plays into the hands of the opposing incumbent interest groups. Some coalitions that emerge in climate politics create unusual bedfellows. Carbon trading policies have been successfully pursued by a coalition of some polluting firms and market-friendly environmental NGOs (Skocpol, 2013). Meckling (2011) argues that this coalition effectively sidelined NGOs favoring carbon taxation and command-and-control regulation as well as those polluting firms that opposed any climate policy whatsoever.[11]

The literature has devoted much of its attention on how interest groups influence policy-making. Generally, two venues can be distinguished: direct and indirect influence (Stokes, 2020). Direct access to policy-making, being at the negotiation table, is a precious asset for organized interests. In technical areas of policy-making, lobbyists have been shown to gain access to policy-makers by providing information and expertise (Bouwen, 2002; Chalmers, 2013; Culpepper, 2011; Hall & Deardorff, 2006; Klüver, 2013). In climate politics, the prime example for access through information can be found in the electricity sector. Most energy markets are no longer vertically integrated, but instead have been restructured into competitively organized markets for the generation, transmission, distribution, and retail of energy. States hold substantial control over the design and regulation of these markets and oversee some monopolized activities. The resulting highly technical private-public-relationships allow the involved firms to utilize their technical knowledge to gain influence over design and regulation (Basseches, 2023).

Direct influence can target two stages of the policy-making process, of which the first is *policy design*—the preferred point of access for interest groups (Stokes, 2013). Interest groups' access to the design stage is mediated by political institutions (Lockwood et al., 2017). Most notably, the system of interest group intermediation determines access. Whereas in corporatist systems, access is institutionally guaranteed, opponents' access in pluralist systems is contingent on having allies in government (Mildenberger, 2020, p. 51). We discuss the role of institutions in the following subsection in more detail. Important for the argument here is that if interest groups find themselves shut out of the design stage, they can engage in damage control, turn toward the second venue, and target *policy implementation*, an often-overlooked but crucial stage for the success of a policy (Stokes, 2013, 2020, p. 43). As a bill becomes law, the power shifts from the hands of legislators to bureaucrats. Policy losers can then either target those new primary decision-makers in the implementation process or turn toward courts to achieve partial or complete retrenchment (Stokes, 2020, p. 62). Bureaucrats are less vulnerable to capture by interest groups as they have, in contrast to legislators, no incentive to engage in legislative bargaining to secure campaign

financing and constituency support (Meckling & Nahm, 2018a). Böhler et al. (2022) explain their null finding regarding the effect of opposing interest group mobilization on policy output with them moving their center of attention from policy design to policy implementation.

If interest groups find themselves unable to influence policy design or implementation, they might turn toward *indirect influence*. First, organized interests can try to shape public opinion on climate change. Since the late 1980s, fossil fuel interests financed advocacy groups, public relations firms, and think tanks with the main purpose of contesting the findings of climate science (Brulle, 2023; Brulle & Werthman, 2021). Alternatively, organized interests can target policy-makers' perception of public opinion. Hertel-Fernandez et al. (2019) show that legislative staffers working for members of the US Congress misestimate their constituent's opinion on CCM and that those who rely more heavily on conservative and business interest groups show more skewed perceptions of public opinion. The second indirect venue is to support and influence existing social movements or even install fake grassroots movements, a strategy called "astroturf" (Cho et al., 2011). In Germany, NIMBY-movements' lawsuits against wind energy installations are reportedly backed by an astroturf network with links to the coal and aluminum industry (Kwasniewski, 2021). In the United States, fossil-backed mobilization by the Tea Party movement disciplined Republican policy-makers not to support renewable energy roll-out, which resulted in the failure of the *American Clean Energy and Security Act* of 2009, better known as the Waxman-Markey bill (Skocpol, 2013). Pressure on parties constitutes the third indirect venue (Mildenberger, 2020; Stokes, 2020). Pushing sitting candidates to align with policy losers' preferences by supporting anti-climate policy challengers in the primaries is an effective strategy in the context of the US electoral system (Skocpol, 2013; Stokes, 2020, p. 64). By targeting parties and not the process of policy-making directly, opposing interest groups effectively politicize renewable energy and expand the scope of political conflict (Mildenberger, 2020, p. 50). Thus, if they find the quiet mode of politics (Culpepper, 2011) to lead to unsatisfactory results, policy losers can increase the volume and feed into the rising electoral salience of CCM. As policy losers are more likely to be shot out of the policy-making process in pluralist countries, we expect the salience of CCM to be higher in these systems than in corporatist countries (see also the higher level of polarization around PCA in majoritarian countries, which tend to have pluralist systems). However, it is important to note that the research on the indirect venue of party politics originates predominantly from the United States. The US's veto-ridden, multi-venue polity is especially favorable to status quo-oriented interest groups as they can shift their activities between judicative, executive, and legislative arena and local, state, and federal level (Hacker et al., 2022; Hertel-Fernandez, 2019). Therefore, the extent to which these findings travel to different national contexts is still open for debate.

To conclude this subsection, we state that much of the IGP literature on climate change focuses on the opposition of policy losers while we know less about supporting interests' strategies' of influence. This one-sidedness might reflect the power equilibrium between both sides. Incumbent policy losers enjoy a competitive political advantage compared to the challenging interest groups because they rely on established organizational resources, experience, and networks (Stokes, 2020). In addition, they benefit from the status-quo bias of politics as the control of one single veto point is sufficient to prevent policy change (Baumgartner et al., 2009; Böhler et al., 2022; Mildenberger, 2020). The focus on mitigation opposition might also reflect the desire of scholars to find strategies to enable effective climate mitigation.

3.3. Policy-makers' strategies to overcome opposition

The IGP literature agrees that the political opposition of interest groups threatened with concentrated costs represents one of the most significant hurdles to ambitious PCA. Consequently, the extent to which this opposition can be overcome is a powerful explanation for cross-national variation in PCA. In the following subsection, we discuss the strategies the literature has identified for policy-makers to overcome resistance to effective climate mitigation: *compensation* and *insulation* (Meckling et al., 2022). Policy-makers can spare losers from bearing (some of) the costs of CCM in return for policy support, called compensation.[12] The alternative strategy is insulation, which can be described as the attempt to lock policy losers out of the policy-making process altogether. Hence, while compensation attempts to "buy" the consent of opposing groups for a policy proposal by reducing the policy costs, insulation strategies do not aim to achieve interest groups' consent for a policy but attempt to render their opposition less consequential. Mildenberger (2020) echoes this typology when he distinguishes policy

proposals crafted with opposing interest groups at the negotiation table and those for which they were shut out of the process. As discussed in the proceeding subsection, opposing interest groups are expected to expand the scope of the policy battle, politicize climate politics, and revert to indirect venues of influence if they find themselves excluded from the policy-making process (Finnegan, 2022; Meckling et al., 2022; Mildenberger, 2020).

Which strategy is most successful depends on the institutional context, specifically the system of interest group intermediation. Interest groups can rely on a place at the table in corporatist systems, but in pluralist systems, their access is dependent on allied policy-makers being in power. Thus, pluralist systems are seen as superior in insulating policy-makers from opposing interest groups. Corporatist systems, however, have an advantage in compensating opponents (Meckling et al., 2022; Mildenberger, 2020). The institutional differences are translated into different policy outcomes. The literature expects corporatist systems to instigate incremental policy change and pluralist systems to foster radical policy change. Hence, pluralist systems can produce high policy ambition if policy-makers in power are committed. However, the ambition can be reversed easily once the political pendulum swings. The US's history of CCM policy-making tells the ideal-typical story of climate politics in pluralist countries, with the course changing massively each time the White House changed partisan hands since the Clinton administration (Mildenberger, 2020; Skocpol, 2013). Corporatist systems lack the highly ambitious policies sometimes created in pluralist systems, but display higher policy stringency on average. Additionally, corporatist systems are expected to privilege producers at the expense of consumers (Finnegan, 2022; Mildenberger, 2020). The German feed-in tariff from 2000 is a classic example of climate policy in a corporatist system that shifts the costs exclusively to private households (Haas, 2019). When assessing the effectiveness of the policies produced by pluralist and corporatist systems, the authors in the field implicitly part ways. Some emphasize the higher policy stringency typically found in corporatist systems (Ćetković & Buzogány, 2016; Finnegan, 2022; Haas, 2019; Lockwood, 2022). Others stress that corporatist systems pay for their stringency with the recurring necessity of compensating powerful policy losers. Hence, they argue, that corporatist systems fail to weaken opponents economically and politically. Pluralist systems, on the other hand, are more likely to deliver high policy ambition, which deals one decisive blow to opposing interest groups (Brand & Pawloff, 2014; Mildenberger, 2020; Tobin, 2017). We consider the disagreement rooted in different understandings of what exactly makes a policy effective. Proponents of corporatism value policy stringency over policy ambition, and it is the other way around for proponents of pluralism. Additionally, proponents of pluralism judge a policy regarding its implications for the power distribution between opposing and supporting interest groups. Hence, their perspective emphasizes the multi-round character of policy-making. This situates them in proximity to policy feedback literature, which we discuss in the upcoming subsection.

3.4. Policy feedback effects and the strategy of policy sequencing

Policy sequencing is a third strategy of policy-makers and builds on policy feedback effects (Pierson, 1993; Schattschneider, 1935). The feedback literature sees CCM policy-making as a multi-round game, introducing a temporal dynamic and mitigation supporting interest groups as central actors into the framework (Breetz et al., 2018). In contrast to approaches that conceptualize the actors that clash over CCM as those vulnerable to climate change and those vulnerable to climate policy (Colgan et al., 2021; Gaikwad et al., 2022), policy feedback sees the winners of climate policy, incoming interest groups, as the adversaries of incumbent losers of climate policy (see Fig. 1, vertical axis). Policy feedback literature in climate politics starts with the notion that climate change mitigation policies can have different cost/benefits profiles, and the political dynamics around energy policy and renewable energy technology change along a *temporal axis* (Aklin & Urpelainen, 2018; Breetz et al., 2018).

Building on the work of Wilson (1980), IGP literature distinguishes two ideal-typical cost/benefit distributions (Allan et al., 2021; Colgan et al., 2021; Meckling, 2019). *(Green) industrial policy* (Rodrik, 2014) distributes concentrated benefits among a small group of producers and imposes diffused costs on the public. Regulatory policy imposes concentrated costs on a small group of producers while distributing diffuse benefits. Alternatively, the two types of policies are labeled "soft" and "hard" (Schulze, 2021) policies, "industrial" and "environmental" (Hughes & Urpelainen, 2015; Meckling, 2021) policies, or "carrots" and "sticks" (Meckling & Strecker, 2023). Due to the lower hurdles the small and homogeneous group of producers faces in overcoming collective action

problems compared to the general public (Olson, 1965), green industrial policy is argued to be easier to pass. However, carrots are essential to policy feedback literature for another reason as well: "carrots buy sticks" (Biber et al., 2017, p. 618). Policies that distribute concentrated benefits now shape politics so that policies with higher costs attached become a more viable option later in time.[13] More concretely, the initial promotion of renewable energy production with green industrial policies like feed-in tariffs, net-metering policies, renewable portfolio standards, or tax incentives benefit policy winners and harm policy losers. Those economic distributional consequences are reflected in the political influence of winners and losers. Additionally, convertible or decarbonizable industries might shift their investment to low-emissions technologies, resulting in a sharp change in political preferences (Kelsey, 2018; Kupzok & Nahm, 2024). Those changes in economic and political industry strength, in turn, influence future rounds of policy-making in which the strengthened supporting interest groups can act as a political counterweight to opponents' long-standing influence. Consequently, more ambitious CCM policy finds its way onto the policy agenda and into legislation. Distributing concentrated benefits in the first stage is thus a viable strategy of policy-sequencing to impose concentrated costs later (Meckling et al., 2015, 2017; Pahle et al., 2018).

With regard to the temporal dynamics of PCA, opposing interest groups tend to underestimate early renewable energy technology (Stokes & Breetz, 2018). Thus, small supporting coalitions of policy winners can nurture initial implementation without facing much opposition. As renewable energy production is rolled out, its costs begin to fall, making renewable energy competitive with fossil fuels and catching the opponent's attention. For them, the temporal dynamic of policy feedback means that they tend to respond too late to stop the renewable energy transition in its tracks and are instead mostly aiming for policy retrenchment (Stokes, 2020) and interrupting policy sequencing (Biber et al., 2017; Pahle et al., 2018). To explain that dynamic Stokes (2020) introduces the concept *fog of enactment* in her seminal work on US state energy legislation. Opposing interest groups and politicians aligned with them operate under imperfect information regarding policy outcomes when new energy policy is designed. Only after policy implementation do the consequences of the policy become clearer. Mobilization for retrenchment starts as soon as the distributive consequences of a policy are felt or experiences are dispersed between jurisdictions via interest group networks. As opposing interest groups mobilize against the emerging threat, they meet an already economically and, thus, politically stronger coalition of supporting interests (Cheon & Urpelainen, 2013). At this point of economic competitiveness, political contestation of energy policy is expected to be the highest. As renewables gain a clear-cut cost advantage, the literature projects conflict to dissipate (Aklin & Urpelainen, 2018; Breetz et al., 2018).

As feedback mechanisms build on a complex interplay of CCM policy, economic activity, and interest group politics, they are mediated by various contextual factors (Lockwood, 2022). These might make or break the success of the policy-sequencing strategy. First, the details of the initial "carrot's" *policy-design* matter. Policy feedback is most effective if setup costs are high, benefits are concentrated, and businesses hold strong adaptive expectations (Jordan & Moore, 2020). To whom the concentrated benefits should be distributed to achieve the best outcome is a point of contention among scholars. While some scholars argue that feedback is effective when it strengthens already established, influential actors, thus consolidating the status-quo distribution (Jordan & Moore, 2020), others praise the dispersion of energy production and ownership as a reason why feed-in tariffs are popular among policy-makers in democratic contexts (Bayer & Urpelainen, 2016; Lockwood, 2022). Second, as discussed above, interest groups' institutional access influences the success of policy feedback. Once established, supporting interests in corporatist countries should be harder to disregard for policy-makers interested in revoking CCM policy. Additionally, corporatist countries might be more successful in passing the first "carrot" by including compensation for opposing interests in the policy. The German feed-in tariff implemented in 2000, for example, exempted companies from paying the energy surcharge that financed it, which allowed the policy proposal to sidestep opposition from the country's politically strong export-oriented and energy-intense manufacturing sector (Haas, 2019).

Lastly, we would expect the literature on *capitalist diversity* to provide substantial contributions the explanation of cross-country variation in policy outcomes. Given the literature's crucial insights into dominant producer coalitions and how they shape policy-making, into national patterns of innovation and drivers of growth, it should have a great deal to say about the viability of establishing and nurturing incoming, novel, and highly technical low-emissions industries in different macro-economic regimes. In his analysis of the wind and solar

technology supply chains, Nahm (2021) finds patterns of national specialization and globalized cooperation. In each country, firms focus on the steps of bringing new technologies from their inception to commercialization, which their public and private institutions best support: The disruptive new technology is initially invented in the United States, Germany's specific-skilled labor force develops the production equipment, and China's economic development zones allowed for the scale-up of production. Although governments in all three countries passed similar industrial policies explicitly aiming to develop vertically integrated industries, distinct national profiles developed. This finding aligns with Varieties of Capitalism's notion of path dependence and competitive advantage. In another piece, Nahm (2022) makes the counter-intuitive finding that green, incoming industries thrive most in export-led growth models even if they have strong opposing interests due to their manufacturing-heavy sectoral structure. The explanation put forward claims that the private and public institutions of export-led growth allow low-emissions industries to develop foreign markets and establish themselves economically. These beneficial institutions triumph over the political opposition from energy-heavy manufacturing. In export-led growth models, linking decarbonization and job creation, as green industrial policy aims for, is thus seen as a more viable strategy for effective PCA than in consumption-led growth models. Consistent with Nahm (2022), Driscoll (2024) finds that consumption-led growth regimes are less likely to invest in renewable energy research & development. Furthermore, he finds the highest investments come from a cluster of dynamic services export-led growth regimes with the edge over manufacturing export-led growth regimes with stronger carbon-intensive sectors (e.g., steel, cement, cars, petroleum products). However, the growth model argument lacks a solid microfoundation anchored in interest group politics, and it remains to be investigated how conflicts along the climate change axis and the climate action axis interact with national and regional growth coalitions. Overall, the macroeconomic regime literature is still in the earlier stages of its engagement with climate change. For example, the German renewable industry success compared to the United Kingdom is attributed to its Coordinated Market Economy by Ćetković and Buzogány (2016) and to its export-led growth model by Lockwood (2022). Such findings call for further research, expansion of the cases typically studied, and the necessity to causally identify the (micro-)mechanisms that drive cross-national variation.

In sum, IGP literature explaining cross-national policy outcome variation mostly focuses on mitigation and its political opponents. Introducing policy winners into the framework is mostly accomplished by policy feedback literature. However, this dichotomy is somewhat simplistic, and too little attention has been paid to the triggers that allow "convertible" (Kelsey, 2018) or "decarbonizable" (Kupzok & Nahm, 2024) industries to become proponents of some mitigation policies. Additionally, studies of climate change adaptation are still missing from the literature.

4. Widening the scope of the study: Climate change adaptation as part of public climate action

Currently, research in the EP and IGP literatures focuses predominantly on climate change mitigation (CCM). Mitigating climate change is essential, and current efforts are insufficient to stop potentially catastrophic increases in average surface temperatures. With the existing measures in place, the world is heading for a rise in temperatures of 2.5°–2.9° by the end of the century (compared to pre-industrial levels). And even current pledges and commitments would result in a temperature rise of 2.1° (Climate Action Tracker, 2023). These numbers not only illustrate global shortcomings in climate change mitigation, but also underlay the necessity of climate change adaptation. Perhaps some scholars might hesitate to openly call for adaptation to not feed into the dangerous narrative that we can ignore mitigation and just adapt accordingly. As the consequences of climate change are increasingly felt, demand for adaptation policies increases. Individuals, firms, communities, and countries must prepare to live in a changing climate and absorb the impacts of climate change. The measures necessary will have grave distributional consequences and most likely compete with mitigation for political attention and—in time of limited public budgets—for public funds. Hence, we call for scholarship to widen the scope and understand PCA as both, mitigation and adaptation.

What does it mean to include adaptation into our analytical framework? We argue that the basic construction of the two-dimensional conflict space remains unchanged. However, we see additional actors inhabiting the ideal-typical poles of the climate action conflict axes. *Winners of climate change adaptation* are to be found among

businesses and voters. Naturally, businesses with economic activity in adaptation areas, e.g., building dams or insulating buildings, win from adaptation. Those benefiting from relief packages after a natural disaster also profit from adaptation policies. However, as adaptation is generally more concrete than mitigation, many more actors can be speculated about. For example, we would also expect individuals who live and work in major cities to be interested in urban green infrastructure as a cooler city climate increases their quality of life. Similarly, riverside property owners win from flood control. *Losers of climate change adaptation* are also found among voters and producers. For example, regulation to limit water consumption during summer months creates policy losers among the more wealthy pool and garden owners. Additionally, it hits farming and other water-intense economic activities. In Spain, conflict around water usage during a drought jumped to the top of the agenda in the 2023 regional and general elections (Andrés, 2023; Millan, 2023).

Widening the scope to accommodate adaptation can also add possibilities for policy bundling to increase supporting coalitions. By addressing mitigation and adaptation in one policy bundle, the group of climate action winners can be enlarged. For example, the Nature Restoration Law, which survived the European Parliament in a razor-thin vote in 2023, aimed at restoring 20% of maritime and land areas by 2030. One explicit measure is to restore agricultural ecosystems by increasing the stock of organic carbon in cropland mineral soils. Such a measure does not only increase the agricultural soil's ability to function as a carbon sink (mitigation). It also increases its ability to absorb and store water and resist desertification, which is important in longer periods of drought (adaptation). Hence, the law provides long-term adaptation benefits to the food system and imposes short-term mitigation costs. Farming interests opposed the Nature Restoration Law fiercely, pointing out the short-term costs, while food majors and retailers came out in support of it and focused their political communication on the long-term benefits (Niranjan, 2023). Without being able to offer an explanation for the different preferences along the agrifood supply chain, we think this example illustrates the increased potential of coalition-building when policies include adaptation and mitigation measures. The emergence of climate change adaptation policy might create even stranger bedfellows.

Still, we have little systematic evidence on the political dynamics of climate change adaptation efforts, particularly in interaction with climate change mitigation. It is an open question whether efforts to mitigate climate change and efforts to adapt to climate change act as complements (offering possibilities for policy bundling as described above) or substitutes where mitigation and adaptation fight for public funding. Such a trade-off scenario again raises the question about the priorities of voters, interest groups, and policy-makers. We also have limited understanding of how different types of mitigation and adaptation policies might be favored by different types of actors under different institutional contexts leading to different political dynamics in the implementation of such policies. Building systematic typologies might serve as a first step toward more rigorous theorizing. For instance, Gaikwad et al. (2022) started a classification effort by differentiating policies by their investing or compensatory function and their target (local or individuals). Our suggestion for such classification efforts is to include adaptation next to mitigation under the umbrella of PCA. Adaptation might currently be sidelined by mitigation. However, the impacts of climate change are increasingly being felt—even in the high-income democracies of the Global North, which show comparatively little vulnerability to climate change to begin with. Extreme weather events are becoming increasingly frequent and severe, and voters and businesses are witnessing it. Adaptation will become increasingly important in PCA. Therefore, we think scholars from both strands of the literature should engage with policy battles around adaptation to understand their dynamics in more detail.

5. Conclusion

This article has critically reviewed recent insights from CPE on the political dynamics surrounding PCA. In light of the tremendous challenge climate warming represents for humankind and the need for decisive action now, we consider CPE's focus on the state's crucial role in facilitating climate change action and the distributive implications around PCE to be highly important. Luckily, CPE research on climate change action has mushroomed in the last decade, developing into two different strands of literature, one that sees "electoral politics" (EP) as the decisive mechanism behind climate policy and one that focuses on "interest group politics" (IGP). This article reviews recent insights generated by these literatures on the political dynamics around PCA with the twin aim to

demonstrate that climate politics should become a core field of CPE and to show the merits of a CPE approach to the study of climate politics.

After describing the conflict around climate as a two-dimensional conflict space and locating the two literatures within that conflict space, our review starts with scholarly knowledge on electoral politics, more specifically on attitudes and preferences toward both climate change and PCA, emphasizing climate and policy vulnerability as the main factors shaping these preferences. We then discuss research that studies how climate change attitudes affect public policy-making through the channels of democratic representation and the channel of retrospective voting. The section reveals that ambitious PCA is an electorally risky endeavor for governments, although the electoral costs depend on the political and institutional context. We then discuss how climate change as a political issue enters party competition, focusing in particular on the association between climate skepticism and the far-right as a driver of polarization around climate change. We continue reviewing scholarly knowledge on the interest group politics of climate change mitigation. This literature mainly asks who the important actors are and how their strategies, policy-makers' actions, and institutions create cross-national variation in outcomes. First, the political conflict between PCA losers and winners is mainly sectoral, although some within-sector variation of policy preferences can be observed. Second, mitigation opponents use direct and indirect venues to influence policy-making. Policy-makers can respond to opponents by insulating them, compensating them, or side-stepping their unabated opposition via policy sequencing.

With regard to the political obstacle to effective PCA, our review concludes that effective PCA seems to be electorally more feasible in countries with proportional electoral systems where governments are shielded from electoral pressure (Finnegan, 2022) or when costly policies are implemented early in the electoral cycle. We also have evidence that compensatory measures can mitigate the electoral blow for incumbent parties (Bolet et al., 2023). The literature on the political consequences of natural disasters shows that PCA also offers options for credit-claiming, mainly in the form of relief packages after natural disasters. Additionally, parties might be able to turn "vice into virute" (Levy, 1999) and claim electoral gains for implementing effective climate action. Evidence is still sparse, but high hopes are placed on compensatory measures such as a carbon fee and dividend that would reward sustainable behavior of citizens materially and correct the regressive character of carbon taxes. The IGP opposition to effective PCA comes mainly from powerful incumbent interest groups invested in polluting economic activities. Scholarship would expect policy-makers to be most successful in enacting ambitious PCA when they apply a strategy that works well within the national institutions of policy-making, most critically the system of interest group intermediation (Finnegan, 2022; Meckling et al., 2022; Mildenberger, 2020), or engage in policy-sequencing (Meckling et al., 2015; Pahle et al., 2018). The integration of climate adaptation (for which natural disaster relief is an example) into our analysis of climate politics allows for a more comprehensive view of the possibilities of policy bundling on the one hand but also on the difficult choice actors must possibly make between adaptation and mitigation when resources are scare.

In addition to these arguments, our review points to two advances for the CPE literature on climate politics. First, in our review, we propose to conceptualize climate politics as a two-dimensional conflict around climate change on the one hand and PCA on the other hand. The two literatures have each focused on only one axis of the conflict. We suggest that a triadic distributive conflict between climate change losers, climate action losers, and climate action winners would bring the literature closer together. It would the attention of the EP literature to turn to support for climate action on account of the direct benefits of PCA and nudge IGP literature to take the climate change loser pole seriously and, therefore, integrate the idea of cross-pressure in this literature.

Second, we propose to expand the scope of CPE's study of PCA to include both *mitigation and adaptation policies*. PCA will not be limited to mitigation, the dominant focus of existing CPE literature. As even highly ambitious mitigation efforts will not prevent today's global temperatures from rising by an additional 0.5 to 0.8°C by the end of the century (Bellon & Massetti, 2022), societies will have to prepare themselves to live with a warmer climate and an increased likelihood of extreme weather events. Building ex-ante resilience greatly reduces ex-post remedial costs for both countries and individuals (Cantelmo et al., 2023). Well known in the economic and developmental study of climate change, climate change adaptation, that is, all measures aimed at preparing individuals, communities, and societies to adapt to the consequences of a warmer climate and the frequency and intensity of extreme weather, has not been systematically integrated in the field of CPE. Considering the

distributive implications of climate change adaptation and its relation to mitigation efforts is vital for our understanding of climate politics.

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Data availability statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Endnotes

[1] Such climate change mitigation is defined as public efforts aiming at a reduction of GHG emissions by transitioning to non-fossil energy sources, increasing energy efficiency, or conserving energy. GHG can also be removed from the atmosphere by reforestation, restoration of wetlands, or capturing CO_2 technically.

[2] These are actors invested in polluting activities, such as firms and their workers in fossil fuels, aviation, shipping, heavy industry, or agriculture. Individuals with a GHG-intense lifestyle also fall into this category, for example, if they depend on a car to commute or live in a single house with high heating expenditures. In the words of Colgan et al. (2021), they are "holders of climate-forcing assets," making them oppose ambitious PCA.

[3] One exception is hydropower. Installations have to be prepared to cope with more irregular precipitation. For example, the Norwegian state-owned energy producer Statkraft announced plans to upgrade 70 dams to withstand heavier rainfall (Millard, 2023).

[4] The share of climate skeptic citizens ranges between 2.3% and 16.5% in Europe, but the issue of climate change itself is more strongly politicized in the Anglo-Saxon countries (Poortinga et al., 2019). More specifically, beliefs about the reality, causes, and impacts of climate change identify types of climate skepticism. Trend skeptics doubt or deny an upward trend in global temperatures, attribution skeptics accept climate change but contest the anthropogenic cause of climate change, and impact skeptics doubt the detrimental impacts of global warming on humans and nature (Rahmstorf, 2004, see also Van Rensburg, 2015 for a similar trilogy of climate change skepticism). Research suggests that political ideology such as a conservative or individualistic worldview and socio-demographic factors such as (old) age, (male) gender, and (lower) education play an important role in shaping people's beliefs about climate change (Hornsey, 2021; Poortinga et al., 2019).

[5] Egalitarian worldviews, social justice values or general beliefs about the human–nature relationship for instance strongly predict support for climate policies, while individualistic and hierarchical values are associated with opposition to climate policy (Harring & Jagers, 2013; Leiserowitz, 2006). Religiosity, particularly Evangelikanism in the United States, is also reported to matter for climate attitudes (Hulme, 2015).

[6] For the sake of completion, we add that in addition to the previously discussed individual factors, public opinion on climate change might also be influenced by political elites, most importantly politicians and political parties (for party cues, see Section 3.2).

[7] See also Knill et al. (2010) on environmental policy as a least likely case for partisan politics due to its internalized nature.

[8] The distinction between hard and soft policies points to the relevance of the type of policy instrument and their different electoral costs.

[9] Given the close conceptual links between the study of climate politics and the analysis of environmental politics (with the climate being a constituent of the broader environment), we include research on party politics in environmental policy in our review where it can offer illumination on the party politics pertaining to climate change. Scholars interested in parties' position on climate, for instance, often have to draw on information on the salience or position of environmental policy for political parties, be it from party manifesto or expert survey data (e.g., Bakker et al., 2020; Volkens et al., 2020).

[10] Climate change mitigation is bigger than the renewable energy transition, and the renewable energy transition is bigger than climate change mitigation. In her work on renewable energy in Brazil and South Africa, Hochstetler (2020) identifies

four policy arenas that determine renewable roll-out: climate change policy, industrial policy, service provision, and siting policy.

[11] The strange-bedfellows argument is reminiscent of the bootlegger and baptist theory of regulation (Buck & Yandle, 2001).

[12] The strategy of compensation is also known in the EP literature, which understands it mainly as cash transfers. In IGP literature, compensation also includes exceptions from new rules for powerful opposing interest groups that allow them to circumvent costs and the policy-maker not to face their opposition.

[13] Additionally, carrots can spill over into other jurisdictions (Hale & Urpelainen, 2015; Meckling, 2021) and policy subfields (Meckling & Goedeking, 2023) as they advance key green industries and create competitive pressures.

References

Aasen, M., & Salen, H. (2022). Rightwing populism and climate policies: Explaining opposition to road tolls in Norway. *Transportation Research Part D: Transport and Environment*, 105, 103222.

Abou-Chadi, T. (2016). Niche party success and mainstream party policy shifts – How green and radical right parties differ in their impact. *British Journal of Political Science*, 46(2), 417–436.

Abraham, J. (2017). Just transitions for the miners: Labor environmentalism in the Ruhr and Appalachian Coalfields. *New Political Science*, 39(2), 218–240.

Aklin, M., & Mildenberger, M. (2020). Prisoners of the wrong dilemma: Why distributive conflict, not collective action, characterizes the politics of climate change. *Global Environmental Politics*, 20(4), 4–27.

Aklin, M., & Urpelainen, J. (2013). Political competition, path dependence, and the strategy of sustainable energy transitions. *American Journal of Political Science*, 57(3), 643–658.

Aklin, M., & Urpelainen, J. (2018). *Renewables: The politics of a global energy transition*. The MIT Press.

Allan, B., Lewis, J. I., & Oatley, T. (2021). Green industrial policy and the global transformation of climate politics. *Global Environmental Politics*, 21(4), 1–19.

Andrés, P. (2023). *Water politics: How Spain's drought became a battle ground for rural votes*. https://www.euractiv.com/section/agriculture-food/news/water-politicshow-spains-drought-became-a-battle-ground-for-rural-votes/

Arndt, C., Halikiopoulou, D., & Vrakopoulos, C. (2023). The centreperiphery divide and attitudes towards climate change measures among Western Europeans. *Environmental Politics*, 32(3), 381–406.

Ausserladscheider, V. (2024). Decoupling climate change: Winter tourism and the maintenance of regional growth. *New Political Economy*, 1–16.

Baccini, L., & Leemann, L. (2021). Do natural disasters help the environment? How voters respond and what that means. *Political Science Research and Methods*, 9(3), 468–484.

Bakker, R., Hooghe, L., Jolly, S., et al. (2020). *2019 Chapel Hill Expert Survey*.

Baranzini, A., & Carattini, S. (2017). Effectiveness, earmarking and labeling: Testing the acceptability of carbon taxes with survey data. *Environmental Economics and Policy Studies*, 19(1), 197–227.

Basseches, J. A. (2023). Who pays for environmental policy? Business power and the design of state-level climate policies. *Politics & Society*.

Baumgartner, F. R., Berry, J. M., Hojnacki, M., Leech, B. L., & Kimball, D. C. (2009). *Lobbying and policy change: Who wins, who loses, and why*. University of Chicago Press.

Bayer, P., & Genovese, F. (2020). Beliefs about consequences from climate action under weak climate institutions: Sectors, home bias, and international embeddedness. *Global Environmental Politics*, 20(4), 28–50.

Bayer, P., & Urpelainen, J. (2016). It is all about political incentives: Democracy and the renewable feed-in tariff. *The Journal of Politics*, 78(2), 603–619.

Bechtel, M. M., Genovese, F., & Scheve, K. F. (2019). Interests, norms and support for the provision of global public goods: The case of climate co-operation. *British Journal of Political Science*, 49(4), 1333–1355.

Bechtel, M. M., & Hainmueller, J. (2011). How lasting is voter gratitude? An analysis of the short- and long-term electoral returns to beneficial policy. *American Journal of Political Science*, 55(4), 852–868.

Beiser-McGrath, L. F., & Bernauer, T. (2019). Could revenue recycling make effective carbon taxation politically feasible? *Science Advances*, 5, 9.

Béland, D., Campbell, A. L., & Kent Weaver, R. (2022). *Policy feedback: How policies shape politics*. Cambridge University Press.

Bellon, M., & Massetti, E. (2022). Economic principles for integrating adaptation to climate change into fiscal policy. In *Staff climate notes* (Vol. 2022, p. 1). International Monetary Fund.

Beramendi, P., Silja, H.a., Kitschelt, H., & Kriesi, H. (2015). *The politics of advanced capitalism*. Cambridge University Press.

Bernauer, T. (2013). Climate change politics. *Annual Review of Political Science*, 16(1), 421–448.

Biber, E., Kelsey, N., & Meckling, J. (2017). The political economy of Decarbonization: A research agenda. *Brooklyn Law Review*, 82(2), 605–643.

Birch, S. (2023). The electoral benefits of environmental position-taking: Floods and electoral outcomes in England 2010–2019. *European Journal of Political Research*, 62(1), 95–117.

Boasson, E. L., Burns, C., & Pulver, S. (2022). The politics of domestic climate governance: Making sense of complex participation patterns. *Journal of European Public Policy*, 30(3), 513–536.

Boecher, M., Zeigermann, U., Berker, L. E., & Jabra, D. (2022). Climate policy expertise in times of populism – Knowledge strategies of the AfD regarding Germany's climate package. *Environmental Politics*, 31(5), 820–840.
Böhler, H., Hanegraaff, M., & Schulze, K. (2022). Does climate advocacy matter? The importance of competing interest groups for national climate policies. *Climate Policy*, 22(8), 961–975.
Bolet, D., Green, F., & Eguino, M. G. (2023). How to get coal country to vote for climate policy: The effect of a "Just Transition Agreement" on Spanish election results. *American Political Science Review*, 1–16.
Boudreau, C., & MacKenzie, S. A. (2014). Informing the electorate? How party cues and policy information affect public opinion about initiatives. *American Journal of Political Science*, 58(1), 48–62.
Bouwen, P. (2002). Corporate lobbying in the European Union: The logic of access. *Journal of European Public Policy*, 9(3), 365–390.
Brand, U., & Pawloff, A. (2014). Selectivities at work: Climate concerns in the midst of corporatist interests. The case of Austria. *Journal of Environmental Protection*, 5(9), 780–795.
Breetz, H. L., Mildenberger, M., & Stokes, L. (2018). The political logics of clean energy transitions. *Business and Politics*, 20(4), 492–522.
Brody, S., Zahran, S., Vedlitz, A., & Grover, H. (2008). Examining the relationship between physical vulnerability and public perceptions of global climate change in the United States. *Environment and Behavior*, 40, 72–95.
Brügger, A., Dessai, S., Wright, P. D., Morton, T. A., & Pidgeon, N. F. (2015). Psychological responses to the proximity of climate change. *Nature Climate Change*, 5, 1031–1037.
Brulle, R. J. (2023). Advocating inaction: A historical analysis of the global climate coalition. *Environmental Politics*, 32(2), 185–206.
Brulle, R. J., Carmichael, J., & Craig Jenkins, J. (2012). Shifting public opinion on climate change: An empirical assessment of factors influencing concern over climate change in the U.S., 2002–2010. *Climatic Change*, 114, 169–188.
Brulle, R. J., & Werthman, C. (2021). The role of public relations firms in climate change politics. *Climatic Change*, 169, 8.
Buck, S., & Yandle, B. (2001). *Bootleggers, baptists, and the global warming battle*. SSRN.
Bush, S. S., & Clayton, A. (2023). Facing change: Gender and climate change attitudes worldwide. *American Political Science Review*, 117(2), 591–608.
Cadoret, I., & Padovano, F. (2016). The political drivers of renewable energies policies. *Energy Economics*, 56, 261–269.
Campbell, A. (2012). Policy makes mass politics. *Annual Review of Political Science*, 15, 333–351.
Cantelmo, A., Melina, G., & Papageorgiou, C. (2023). Macroeconomic outcomes in disaster-prone countries. *Journal of Development Economics*, 161, 103037.
Carattini, S., Baranzini, A., Thalmann, P., Varone, F., & Vöhringer, F. (2017). Green taxes in a post-paris world: Are millions of nays inevitable? *Environmental and Resource Economics*, 68(1), 97–128.
Carattini, S., Kallbekken, S., & Orlov, A. (2019). How to win public support for a global carbon tax. *Nature*, 565(7739), 289–291.
Carmichael, J. T., & Brulle, R. J. (2017). Elite cues, media coverage, and public concern: An integrated path analysis of public opinion on climate change, 2001–2013. *Environmental Politics*, 26(2), 232–252.
Carter, N., Ladrech, R., Little, C., & Tsagkroni, V. (2018). Political parties and climate policy: A new approach to measuring parties' climate policy preferences. *Party Politics*, 24(6), 731–742.
Carter, N., & Little, C. (2021). Party competition on climate policy: The roles of interest groups, ideology and challenger parties in the UK and Ireland. *International Political Science Review*, 42(1), 16–32.
Cazals, A., & Sauquet, A. (2015). How do elections affect international cooperation? Evidence from environmental treaty participation. *Public Choice*, 162(3), 263–285.
Ćetković, S., & Buzogány, A. (2016). Varieties of capitalism and clean energy transitions in the European Union: When renewable energy hits different economic logics. *Climate Policy*, 16(5), 642–657.
Ćetković, S., & Hagemann, C. (2020). Changing climate for populists? Examining the influence of radical-right political parties on low-carbon energy transitions in Western Europe. *In: Energy Research Social Science*, 66, 101571.
Chalmers, A. W. (2013). Trading information for access: Informational lobbying strategies and interest group access to the European Union. *Journal of European Public Policy*, 20(1), 39–58.
Cheon, A., & Urpelainen, J. (2013). How do competing interest groups influence environmental policy? The case of renewable electricity in industrialized democracies, 1989–2007. *Political Studies*, 61(4), 874–897.
Cho, C. H., Martens, M. L., Kim, H., & Rodrigue, M. (2011). Astroturfing global warming: It isn't always greener on the other side of the fence. *Journal of Business Ethics*, 104(4), 571–587.
Climate Action Tracker. (2023). *2100 Warming Projections: Emissions and expected warming based on pledges and current policies*. https://climateactiontracker.org/global/temperatures/
Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology*, 85(5), 808–822.
Coleman, E. A., Harring, N., & Jagers, S. C. (2023). Policy attributes shape climate policy support. *Policy Studies Journal*, 51(2), 419–437.
Colgan, J. D., Green, J. F., & Hale, T. N. (2021). Asset revaluation and the existential politics of climate change. *International Organization*, 75(2), 586–610.
Conover, P. J., & Feldman, S. (1989). Candidate perception in an ambiguous world: Campaigns, cues, and inference processes. *American Journal of Political Science*, 33(4), 912–940.
Cory, J., Lerner, M., & Osgood, I. (2021). Supply chain linkages and the extended carbon coalition. *American Journal of Political Science*, 65(1), 69–87.
Craig, R. K. (2013). The social and cultural aspects of climate change winners. *Minnesota Law Review*, 97(4), 1416–1430.

Culpepper, P. D. (2011). *Quiet politics and business power: Corporate control in Europe and Japan/Pepper D. Culpepper*. Cambridge Studies in Comparative Politics.
Culpepper, P. D. (2015). Structural power and political science in the post-crisis era. *Business and Politics*, 17(3), 391–409.
Culpepper, P. D., & Reinke, R. (2014). Structural power and bank bailouts in the United Kingdom and the United States. *Politics and Society*, 42(4), 427–454.
Davidovic, D. (2023). Corruption, Trust, and Attitudes Towards Carbon Taxes: Survey experimental evidence from Mexico and Sweden. *QoG Working Paper Series*.
Demski, C., Capstick, S., Pidgeon, N., Sposato, R. G., & Spence, A. (2017). Experience of extreme weather affects climate change mitigation and adaptation responses. *Climatic Change*, 140, 149–164.
Dolsak, N., Adolph, C., & Prakash, A. (2020). Policy design and public support for carbon tax: Evidence from a 2018 US national online survey experiment. *Public Administration*, 98(4), 905–921.
Downie, C. (2017). Fighting for King Coal's crown: Business actors in the US coal and utility industries. *Global Environmental Politics*, 17(1), 21–39.
Driscoll, D. (2024). Comparative green advantage: Growth regimes and public investment in renewable energy R&D. *JCMS: Journal of Common Market Studies*, 62(1), 285–294.
Duch, R. M., & Stevenson, R. (2010). The global economy, competency, and the economic vote. *The Journal of Politics*, 72(1), 105–123.
Eldemerdash, N., Jensen, C. B., & Landis, S. T. (2023). Environmental stress, majoritarianism, and social unrest in Europe. *Journal of Contemporary Central and Eastern Europe*, 31(2), 385–408.
Fairbrother, M. (2017). Environmental attitudes and the politics of distrust. *Sociology Compass*, 11(5), e12482.
Fairbrother, M. (2019). When will people pay to pollute? Environmental taxes, political trust and experimental evidence from Britain. *British Journal of Political Science*, 49(2), 661–682.
Fankhauser, S., Gennaioli, C., & Collins, M. (2015). The political economy of passing climate change legislation: Evidence from a survey. *Global Environmental Change*, 35, 52–61.
Farstad, F. M. (2017). What explains variation in parties' climate change salience? *Party Politics*, 24(6), 698–707.
Finnegan, J. J. (2022). Institutions, climate change, and the foundations of long-term policymaking. *Comparative Political Studies*, 55(7), 1198–1235.
Finnegan, J. J. (2023). Changing prices in a changing climate: Electoral competition and fossil fuel taxation. *Comparative Political Studies*, 56(8), 1257–1290.
Forchtner, B. (2020). *The far right and the environment: Politics, discourse and communication* (1st ed.). Routledge.
Forchtner, B., & Lubarda, B. (2023). Scepticisms and beyond? A comprehensive portrait of climate change communication by the far right in the European Parliament. *Environmental Politics*, 1, 43–68.
Fremstad, A., Mildenberger, M., Paul, M., & Stadelmann-Steffen, I. (2022). The role of rebates in public support for carbon taxes. *Environmental Research Letters*, 17, 1–9.
Gaikwad, N., Genovese, F., & Tingley, D. (2022). Creating climate coalitions: Mass preferences for compensating vulnerability in the world's two largest democracies. *American Political Science Review*, 116(4), 1165–1183.
Gainza, X., & Montes-Nebreda, A. (2023). The waste war: On the electoral costs of local sustainability policies. *Journal of Environmental Policy & Planning*, 25(5), 625–641.
Garritzmann, J. L., Neimanns, E., & Busemeyer, M. R. (2023). Public opinion towards welfare state reform: The role of political trust and government satisfaction. *European Journal of Political Research*, 62(1), 197–220.
Garside, S., & Zhai, H. (2022). If not now, when? Climate disaster and the Green vote following the 2021 Germany floods. *Research & Politics*, 9(4), 1–8.
Gasper, J. T., & Reeves, A. (2011). Make it rain? Retrospection and the attentive electorate in the context of natural disasters. *American Journal of Political Science*, 55(2), 340–355.
Gazmararian, A. F., & Milner, H. V. (2023a). Firm responses to climate change: Exit and voice.
Gazmararian, A. F., & Milner, H. V. (2023b). Preference updating under uncertainty: Evidence from responses to global warming.
Gazmararian, A. F., & Tingley, D. (2023). *Uncertain futures: How to unlock the climate impasse*. Cambridge University Press.
Genovese, F. (2019). Sectors, pollution, and trade: How industrial interests shape domestic positions on global climate agreements. *International Studies Quarterly*, 63(4), 819–836.
Genovese, F., & Tvinnereim, E. (2019). Who opposes climate regulation? Business preferences for the European emission trading scheme. *The Review of International Organizations*, 14(3), 511–542.
Goren, P., Federico, C. M., & Kittilson, M. C. (2009). Source cues, partisan identities, and political value expression. *American Journal of Political Science*, 53(4), 805–820.
Green-Pedersen, C. (2002). *The politics of justification: Party competition and welfare-state retrenchment in Denmark and The Netherlands from 1982 to 1998*. Amsterdam University Press.
Guber, D. L. (2013). A cooling climate for change? Party polarization and the politics of global warming. *American Behavioral Scientist*, 57(1), 93–115.
Haas, T. (2019). Comparing energy transitions in Germany and Spain using a political economy perspective. *Environmental Innovation and Societal Transitions*, 31, 200–210.
Hacker, J. S., Hertel-Fernandez, A., Pierson, P., & Thelen, K. (2022). The American political economy: Markets, power, and the meta politics of US economic governance. *Annual Review of Political Science*, 25(1), 197–217.
Hacker, J. S., & Pierson, P. (2010). Winner-take-all politics: Public policy, political organization, and the precipitous rise of top incomes in the United States. *Politics and Society*, 38(2), 152–204.
Hacker, J. S., & Pierson, P. (2002). Business power and social policy: Employers and the formation of the American welfare state. *Politics and Society*, 30(2), 277–325.

Hale, T., & Urpelainen, J. (2015). When and how can unilateral policies promote the international diffusion of environmental policies and clean technology? *Journal of Theoretical Politics*, 27(2), 177–205.
Hall, P. A., & Soskice, D. (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford University Press.
Hall, R. L., & Deardorff, A. V. (2006). Lobbying as legislative subsidy. *American Political Science Review*, 100(1), 69–84.
Hamilton, L. C., Wake, C. P., Hartter, J., Safford, T. G., & Puchlopek, A. J. (2016). Flood realities, perceptions and the depth of divisions on climate. *Sociology*, 50(5), 913–933.
Harring, N., & Jagers, S. C. (2013). Should we trust in values? Explaining public support for pro-environmental taxes. *Sustainability*, 5(1), 210–227.
Harrison, K. (2010). The comparative politics of carbon taxation. *Annual Review of Law and Social Science*, 6(1), 507–529.
Harrison, K., & Peet, C. (2012). Historical legacies and policy reform: Diverse regional reactions to British Columbia's carbon tax. *BC Studies: The British Columbian Quarterly*, 173, 97–122.
Harrison, K., & Sundstrom, L. M. I. (2010). *Global commons, domestic decisions: The comparative politics of climate change*. The MIT Press.
Hart, D. (2002). Business is not an interest group (and, by the way, there's no such thing as 'Business'): On the study of companies in American National Politics. KSG Faculty Research Working Papers Series RWP02-032.
Hazlett, C., & Mildenberger, M. (2020). Wildfire exposure increases pro-environment voting within democratic but not republican areas. *American Political Science Review*, 114(4), 1359–1365.
Henriks, S., Harring, N., & Droste, N. (2023). Voters do not punish their government for climate policies – Evidence from Swedish temporal regression discontinuities. *CeCAR Working Paper Series*.
Hertel-Fernandez, A. (2019). *State capture: How conservative activists, big businesses, and wealthy donors reshaped the American states – And the nation*. Oxford University Press.
Hertel-Fernandez, A., Mildenberger, M., & Stokes, L. C. (2019). Legislative staff and representation in congress. *American Political Science Review*, 113(1), 1–18.
Hilbig, H., & Riaz, S. (2024). Natural disasters and green party support. *The Journal of Politics*, 86(1), 241–256.
Hochstetler, K. (2020). *Political economies of energy transition: Wind and solar power in Brazil and South Africa*. Cambridge University Press.
Hooghe, L., & Marks, G. (2018). Cleavage theory meets Europe's crises: Lipset, Rokkan, and the transnational cleavage. *Journal of European Public Policy*, 25(1), 109–135.
Hornsey, M. J. (2021). The role of worldviews in shaping how people appraise climate change. *Current Opinion in Behavioral Sciences*, 42, 36–41.
Howe, P. D. (2018). Perceptions of seasonal weather are linked to beliefs about global climate change: Evidence from Norway. *Climatic Change*, 148, 467–480.
Howe, P. D., Marlon, J. R., Mildenberger, M., & Shield, B. S. (2019). How will climate change shape climate opinion? *Environmental Research Letters*, 14(11), 113001.
Huber, E., & Stephens, J. (2001). *Development and crisis of the welfare state: Parties and policies in global markets*. University of Chicago Press.
Huber, M. T. (2022). *Climate change as class war: Building socialism on a warming planet*. Verso Books.
Huber, R. A., Greussing, E., & Eberl, J.-M. (2021). From populism to climate scepticism: The role of institutional trust and attitudes towards science. *Environmental Politics*, 31(7), 1115–1138.
Hughes, L., & Urpelainen, J. (2015). Interests, institutions, and climate policy: Explaining the choice of policy instruments for the energy sector. *Environmental Science & Policy*, 54, 52–63.
Hulme, M. (2015). Varieties of religious engagement with climate change. In W. Jenkins, M. E. Tucker, & J. Grim (Eds.), *Routledge handbook of religion and ecology* (pp. 239–248). Routledge International Handbooks, Routledge.
Inglehart, R. (1995). Public support for environmental-protection—Objective problemsand subjective values in 43 societies. *PS Political Science & Politics*, 28, 57–72.
IRENA and ILO. (2022). *Renewable energy and jobs: Annual review 2022*. International Renewable Energy Agency and International Labour Organization.
Iyengar, S., Lelkes, Y., Levendusky, M., Malhotra, N., & Westwood, S. J. (2019). The origins and consequences of affective polarization in the United States. *Annual Review of Political Science*, 22(1), 129–146.
Jagers, S. C., & Hammar, H. (2009). Environmental taxation for good and for bad: The efficiency and legitimacy of Sweden's car bon tax. *Environmental Politics*, 18(2), 218–237.
Jahn, D. (2022). Party families and greenhouse gas emissions: A new perspective on an old concept. *Zeitschrift ̈fur Vergleichende Politikwissenschaft*, 15(4), 477–496.
Jenkins, K., McCauley, D., Heffron, R., Stephan, H., & Rehner, R. (2016). Energy justice: A conceptual review. *Energy Research & Social Science*, 11, 174–182.
Jordan, A. J., & Moore, B. (2020). *Durable by design?: Policy feedback in a changing climate*. Cambridge University Press.
Kalaitzake, M. (2022). Structural power without the structure: A class-centered challenge to new structural power formulations. *Politics and Society*, 50(4), 655–687.
Kallbekken, S., & Salen, H. (2011). Public acceptance for environmental taxes: Selfinterest, environmental and distributional concerns. *Energy Policy*, 39(5), 2966–2973.
Kallbekken, S., Salen, H., & Hermansen, E. (2017). Consumer preferences for energy efficient cars in Norway. In *Heading towards sustainable energy systems: Evolution or revolution?, 15th IAEE European Conference, Sept 3–6*. International Association for Energy Economics.
Kalt, T. (2021). Jobs vs. climate justice? Contentious narratives of labor and climate movements in the coal transition in Germany. *Environmental Politics*, 30(7), 1135–1154.

Kelsey, N. (2018). Industry type and environmental policy: Industry characteristics shape the potential for policymaking success in energy and the environment. *Business and Politics*, 20(4), 615–642.
Kennard, A. (2020). The enemy of my enemy: When firms support climate change regulation. *International Organization*, 74(2), 187–221.
Kim, I. S. (2017). Political cleavages within industry: Firm-level lobbying for trade liberalization. *American Political Science Review*, 111(1), 1–20.
Kitschelt, H. (1994). *The transformation of European social democracy* (1st ed.). Cambridge Studies in Comparative Politics.
Kitschelt, H. (2001). Partisan competition and welfare state retrenchment. When do politicians choose unpopular policies? In P. Pierson (Ed.), *The new politics of the welfare state* (pp. 265–302). Oxford University Press.
Klüver, H. (2013). *Lobbying in the European Union: Interest groups, lobbying coalitions, and policy change*. Oxford University Press.
Klüver, H. (2020). Setting the party agenda: Interest groups, voters and issue attention. *British Journal of Political Science*, 50(3), 979–1000.
Knill, C., Debus, M., & Heichel, S. (2010). Do parties matter in internationalised policy areas? The impact of political parties on environmental policy outputs in 18 OECD countries, 1970–2000. *European Journal of Political Research*, 49(3), 301–336.
Konisky, D., Hughes, L., & Kaylor, C. (2016). Extreme weather events and climate change concern. *Climatic Change*, 134, 533–547.
Koreh, M., & Mandelkern, R. (2023). Trade-offs of government credibility institutions: Market credibility vs. social credibility. *Journal of European Public Policy*, 1–22.
Kriesi, H., Grande, E., Lachat, R., Dolezal, M., Bornschier, S., & Frey, T. (2008). *West European politics in the age of globalization*. Cambridge University Press.
Kulin, J., Sevä, I. J., & Dunlap, R. E. (2021). Nationalist ideology, rightwing populism, and public views about climate change in Europe. *Environmental Politics*, 30(7), 1111–1134.
Kupzok, N., & Nahm, J. (2024). The Decarbonization bargain: How the decarbonizable sector shapes climate politics. *Paper presented at MAX CPE Workshop Series, Cologne, January 17*.
Kwasniewski, N. (2021). *Die Anti-Windkraft-Bewegung*. https://www.spiegel.de/wirtschaft/windenergie-so-verhindertdie-anti-windkraft-bewegung-neue-anlagen-a-46d88419-3b1d-427d-b6c0-cf696fec283c
Ladrech, R., & Little, C. (2019). Drivers of political parties' climate policy preferences: Lessons from Denmark and Ireland. *Environmental Politics*, 28(6), 1017–1038.
Lake, D. A. (2009). Open economy politics: A critical review. *The Review of International Organizations*, 9, 219–244.
Leeper, T. J., & Slothuus, R. (2014). Political parties, motivated reasoning, and public opinion formation. *Political Psychology*, 35(S1), 129–156.
Leiserowitz, A. (2006). Climate change risk perception and policy preferences: The role of affect, imagery, and values. *Climatic Change*, 77, 45–72.
Lépissier, A., Boutron, C., Lachapelle, E., Mildenberger, M., & Harrison, K. (2022). Material interest vs. partisan identity as drivers of opposition to carbon taxes. In M. Lerner & I. Osgood (Eds.), *Across the boards: Explaining firm support for climate policy* (pp. 1–24). British Journal of Political Science.
Lerner, M., & Osgood, I. (2023). Across the boards: Explaining firm support for climate policy. *British Journal of Political Science*, 53(3), 943–957.
Levy, J. D. (1999). Vice into virtue? Progressive politics and welfare reform in continental Europe. *Politics and Society*, 27(2), 239–273.
Lewis-Beck, M. S., & Stegmaier, M. (2019). Economic Voting. In R. D. Congleton, B. Grofman, & S. Voigt (Eds.), *The Oxford handbook of public choice, Volume 1* (pp. 247–265). Oxford University Press.
Linde, S. (2020). The politicization of risk: Party cues, polarization, and public perceptions of climate change risk. *Risk Analysis*, 40(10), 2002–2018.
Lockwood, M. (2018). Right-wing populism and the climate change agenda: Exploring the linkages. *Environmental Politics*, 27(4), 712–732.
Lockwood, M. (2022). Policy feedback and institutional context in energy transitions. *Policy Sciences*, 55(3), 487–507.
Lockwood, M., Kuzemko, C., Mitchell, C., & Hoggett, R. (2017). Historical institutionalism and the politics of sustainable energy transitions: A research agenda. *Environment and Planning C: Politics and Space*, 35(2), 312–333.
Lodge, M., & Taber, C. S. (2013). *The rationalizing voter*. Cambridge University Press.
Lübke, C. (2022). Socioeconomic roots of climate change denial and uncertainty among the European population. *European Sociological Review*, 38(1), 153–168.
Lüth, M., & Schaffer, L. M. (2022). The electoral importance and evolution of climaterelated energy policy: Evidence from Switzerland. *Swiss Political Science Review*, 28(2), 169–189.
Manow, P., Palier, B., & Schwander, H. (2018). Welfare democracies and party politics. In *Explaining electoral dynamics in times of changing welfare capitalism*. Oxford University Press.
Manow, P., & Schwander, H. (2022). Eine differenzierte Erklärung für den Erfolg der AfD in West- und Ostdeutschland. In H. U. Brinkmann & K.-H. Reuband (Eds.), *Rechtspopulismus in Deutschland: Wahlverhalten in Zeiten politischer Polarisierung* (pp. 163–191). Springer Fachmedien Wiesbaden.
Mares, I., Scheve, K., & Toenshof, C. (2024). Compensation, beliefs in state effectiveness, and support for the energy transition. In *Working paper presented at the PPRN second annual meeting "New Directions in Green Industrial Policy", January 11-12*. Nuffield College Oxford University.
McCright, A. M., Dunlap, R. E., & Marquart-Pyatt, S. T. (2016). Political ideology and views about climate change in the European Union. *Environmental Politics*, 25(2), 338–358.

Meckling, J. (2011). *Carbon coalitions: Business, climate politics, and the rise of emissions trading*. The MIT Press.
Meckling, J. (2015). Oppose, support, or hedge? Distributional effects, regulatory pressure, and business strategy in environmental politics. *Global Environmental Politics*, 15(2), 19–37.
Meckling, J. (2019). A new path for U.S. climate politics: Choosing policies that mobilize business for decarbonization. *The ANNALS of the American Academy of Political and Social Science*, 685(1), 82–95.
Meckling, J. (2021). Making industrial policy work for decarbonization. *Global Environmental Politics*, 21(4), 134–147.
Meckling, J., & Goedeking, N. (2023). Coalition cascades: The politics of tipping points in clean energy transitions. *Policy Studies Journal*, 51, 1–25.
Meckling, J., Kelsey, N., Biber, E., & Zysman, J. (2015). Winning coalitions for climate policy. *Science*, 349(6253), 1170–1171.
Meckling, J., Lipscy, P. Y., Finnegan, J. J., & Metz, F. (2022). Why nations lead or lag in energy transitions. *Science*, 378(6615), 31–33.
Meckling, J., & Nahm, J. (2018a). The power of process: State capacity and climate policy. *Governance*, 31(4), 741–757.
Meckling, J., & Nahm, J. (2018b). When do states disrupt industries? Electric cars and the politics of innovation. *Review of International Political Economy*, 25(4), 505–529.
Meckling, J., Sterner, T., & Wagner, G. (2017). Policy sequencing toward decarbonization. *Nature Energy*, 2(12), 918–922.
Meckling, J., & Strecker, J. (2023). Green bargains: Leveraging public investment to advance climate regulation. *Climate Policy*, 23(4), 418–429.
Meguid, B. M. (2005). Competition between unequals: The role of mainstream party strategy in niche party success. *American Political Science Review*, 99(3), 347–359.
Meltzer, A. H., & Richard, S. F. (1981). A rational theory of the size of government. *Journal of political Economy*, 89(5), 914–927.
Merkley, E., & Stecula, D. A. (2021). Party cues in the news: Democratic elites, republican backlash, and the dynamics of climate skepticism. *British Journal of Political Science*, 51(4), 1439–1456.
Mildenberger, M. (2020). *Carbon captured: How business and labor control climate politics*. MIT Press.
Mildenberger, M., & Leiserowitz, A. (2017). Public opinion on climate change: Is there an economy–environment tradeoff? *Environmental Politics*, 26(5), 801–824.
Millan, L. (2023). *Spain's Climate Election Pits Water Police Against Angry Berry Farmers*. https://www.bloomberg.com/news/features/2023-07-22/spanish-climate-election-what-s-at-stake-ascountry-suffers-heat-drought?embeddedcheckout=true
Millard, R. (2023). *Europe's biggest renewables group shores up dams against extreme weather*. https://www.ft.com/content/f117ccca-4b8f-49a4-8b02-00d2d7cbe02d
Montfort, S., Fesenfeld, L., Stadelmann-Steffen, I., & Ingold, K. (2023). Policy sequencing can increase public support for ambitious climate policy. *Policy and Society*, 42(4), 454–477.
Nahm, J. (2021). *Collaborative advantage: Forging green industries in the new global economy*. Oxford University Press.
Nahm, J. (2022). Green growth models. In L. Baccaro, M. Blyth, & J. Pontusson (Eds.), *Diminishing returns: The new politics of growth and stagnation*. Oxford University Press.
Neumayer, E. (2003). Are left-wing party strength and corporatism good for the environment? Evidence from panel analysis of air pollution in OECD countries. *Ecological Economics*, 45(2), 203–220.
Newell, P., & Mulvaney, D. (2013). The political economy of the 'just transition'. *The Geographical Journal*, 179(2), 132–140.
Niranjan, A. (2023). *EU passes nature restoration law in knife-edge vote*. https://www.theguardian.com/world/2023/jul/12/eupasses-nature-restoration-law-vote-meps
Nordhaus, W. D. (1975). The political business cycle. *The Review of Economic Studies*, 42(2), 169–190.
Olson, M. (1965). *The logic of collective action: Public goods and the theory of groups*. Harvard University Press.
Oswald, M. T., Fromm, M., & Broda, E. (2021). Strategic clustering in rightwing-populism? 'Green policies' in Germany and France. *Zeitschrift fur Vergleichende Politikwissenschaft*, 15(2), 185–205.
Otteni, C., & Weisskircher, M. (2021). Global warming and polarization. Wind turbines and the electoral success of the greens and the populist radical right. *European Journal of Political Research*, 61(4), 1102–1122.
Otteni, C., & Weisskircher, M. (2022). AfD gegen die Grunen? Rechtspopulismu und klimapolitische Polarisierung in Deutschland. *Forschungsjournal Soziale Bewegungen*, 35(2), 317–335.
Otto, I. M., Reckien, D., Reyer, C. P. O., Marcus, R., le Masson, V., Jones, L., Norton, A., & Serdeczny, O. (2017). Social vulnerability to climate change: A review of concepts and evidence. *Regional Environmental Change*, 17, 1651–1662.
Pahle, M., Burtraw, D., Flachsland, C., Kelsey, N., Biber, E., Meckling, J., Edenhofer, O., & Zysman, J. (2018). Sequencing to ratchet up climate policy stringency. *Nature Climate Change*, 8(10), 861–867.
Palier, B., & Thelen, K. (2010). Institutionalizing dualism: Complementarities and change in France and Germany. *Politics and Society*, 38(1), 119–148.
Patterson, J. J. (2023). Backlash to climate policy. *Global Environmental Politics*, 23(1), 68–90.
Pierson, P. (1993). When effect becomes cause: Policy feedback and political change. *World Politics*, 45(4), 595–628.
Pierson, P. (2001). *The new politics of the welfare state*. Oxford University Press.
Poortinga, W., Whitmarsh, L., Steg, L., Böhm, G., & Fisher, S. (2019). Climate change perceptions and their individual-level determinants: A cross-European analysis. *Global Environmental Change*, 55, 25–35.
Popkin, S. L. (1991). *The reasoning voter: Communication and persuasion in presidential campaigns*. University of Chicago Press.
Poulantzas, N., & Miliband, R. (1972). The problem of the capitalist state. In R. Blackburn (Ed.), *Ideology in social science: Readings in critical social theory* (pp. 238–262). Pantheon Books.
Rüttenauer, T. (2023). More talk, no action? The link between exposure to extreme weather events, climate change belief and proenvironmental behaviour. *European Societies*, 1–25.

Rafaty, R. (2018). Perceptions of corruption, political distrust, and the weakening of climate policy. *Global Environmental Politics*, 18(3), 106–129.
Rahmstorf, S. (2004). *The climate sceptics* (pp. 76–83). Weather Catastrophes and Climate Change.
Reitz, T., & Jörke, D. (2021). The reshaping of political representation in post-growth capitalism: A paradigmatic analysis of green and right-wing populist parties. *Anthropological Theory*, 21(3), 287–314.
Riedel, R. (2021). Green conservatism or environmental nativism? *Zeitschrift für Vergleichende Politikwissenschaft*, 15(2), 207–227.
Rodrik, D. (2014). Green industrial policy. *Oxford Review of Economic Policy*, 30(3), 469–491.
Ross, F. (2000). Framing welfare reform in affluent societies: Rendering restructuring more palatable? *Journal of Public Policy*, 20(2), 169–193.
Rotaris, L., Danielis, R., & Maltese, I. (2019). Carsharing use by college students: The case of Milan and Rome. *Transportation Research Part A: Policy and Practice*, 120, 239–251.
Rueda, D. (2007). *Social democracy inside out: Partisanship and labor market policy in advanced industrialized democracies*. Oxford University Press.
Ruhl, J. B. (2012). The political economy of climate change winners. *Minnesota Law Review*, 97(1), 206–277.
Schaffer, L. M., & Levis, A. (2022). Public discourses on (sectoral) energy policy in Switzerland. In P. Hettich & A. Kachi (Eds.), *Swiss energy governance: Political, economic and legal challenges and opportunities in the energy transition* (pp. 313–343). Springer International Publishing.
Schattschneider, E. E. (1935). *Politics, pressure and the tariff*. Prentice-Hall.
Schulze, K. (2021). Policy characteristics, electoral cycles, and the partisan politics of climate change. *Global Environmental Politics*, 21(2), 44–72.
Schwander, H., Schiefendecker, D., Hutter, S., & Specht, J. (2022). Linking structural divides and political organization: Affective polarization between opinion-based groups in a globalized era. *European Journal of Political Research*.
Skocpol, T. (2013). Naming the problem: What it will take to counter extremis and engage Americans in the fight against global warming. Prepared for the Symposium: The Politics of America's Fight Against Global Warming, Harvard University.
Slothuus, R., & Bisgaard, M. (2021). Party over pocketbook? How party cues influence opinion when citizens have a stake in policy. *American Political Science Review*, 115(3), 1090–1096.
Speed, M. (2023). *Winemakers in England reap rewards of warming climate*. https://www.ft.com/content/221e3628-7372-46d6-887a-d72ce48f6ee9
Spence, A., Poortinga, W., & Pidgeon, N. (2012). The psychological distance of climate change. *Risk Analysis*, 32(6), 957–972.
Spoon, J.-J., Hobolt, S. B., & de Vries, C. E. (2014). Going green: Explaining issue competition on the environment. *European Journal of Political Research*, 53(2), 363–380.
Stadelmann-Steffen, I., & Dermont, C. (2018). The unpopularity of incentive-based instruments: What improves the cost–benefit ratio? *Public Choice*, 175(1–2), 37–62.
Stöhr, V. (2022). Climate protection in Germany: Party cues in a multi-party system. *Munich Papers in Political Economy, Munich School of Politics and Public Policy and the School of Management at the Technical University of Munich* 23.
Stokes, L. C. (2013). The politics of renewable energy policies: The case of feed-in tariffs in Ontario, Canada. *Energy Policy*, 56, 490–500.
Stokes, L. C. (2016). Electoral backlash against climate policy: A natural experiment on retrospective voting and local resistance to public policy. *American Journal of Political Science*, 60(4), 958–974.
Stokes, L. C. (2020). *Short circuiting policy: Interest groups and the battle over clean energy and climate policy in the American states*. Oxford University Press.
Stokes, L. C., & Breetz, H. L. (2018). Politics in the U.S. energy transition: Case studies of solar, wind, biofuels and electric vehicles policy. *Energy Policy*, 113, 76–86.
Taylor, A., de Bruin, W. B., & Dessai, S. (2014). Climate change beliefs and perceptions of weather-related changes in the United Kingdom. *Risk Analysis*, 34(11), 1995–2004.
Tegat, W. J. M., Sheldon, G. W., & Griffiths, D. C. (1990). *Climate change: The IPCC impact assessment. Report prepared for Integovernmental Panel on Climate Change by Working Group II*. Australian Government Publishing Service.
Tesler, M. (2018). Elite domination of public doubts about climate change (not evolution). *Political Communication*, 35(2), 306–326.
Thalmann, P. (2004). The public acceptance of green taxes: 2 million voters express their opinion. *Public Choice*, 119(1), 179–217.
Thomas, A. (2021). 'Heart of steel': How trade unions lobby the European Union over emissions trading. *Environmental Politics*, 30(7), 1217–1236.
Tobin, P. (2017). Leaders and laggards: Climate policy ambition in developed states. *Global Environmental Politics*, 17(4), 28–47.
Tranter, B. (2011). Political divisions over climate change and environmental issues in Australia. *Environmental Politics*, 20(1), 78–96.
Tresch, A., Lauener, L., Bernhard, L., Lutz, G., & Scaperrotta, L. (2020). *Eidgenössische Wahlen 2019 – Wahlteilnahme und Wahlentscheid. Report*. Université de Lausanne, Géopolis.
Valentim, A. (2021). *Imperfect Information and Party Responsiveness: Evidence from Extreme Weather Events and the Green Party in England*.
Van Rensburg, W. (2015). Climate change scepticism: A conceptual re-evaluation. *SAGE Open*, 5, 2.
Vihma, A., Reischl, G., & Andersen, A. N. (2021). A climate backlash: Comparing populist parties' climate policies in Denmark, Finland, and Sweden. *The Journal of Environment & Development*, 30(3), 219–239.

Volkens, A., Burst, T., Krause, W., et al. (2020). *The Manifesto Data Collection. Manifesto Project (MRG/CMP/MARPOR) Version 2020a*.
Vormedal, I., Gulbrandsen, L. H., & Skjarseth, J. B. (2020). Big oil and climate regulation: Business as usual or a changing business? *Global Environmental Politics*, 20(4), 143–166.
Vormedal, I., & Meckling, J. (2023). *How foes become allies: The shifting role of business in climate politics*. Policy Sciences.
Weber, E. U. (2016). What shapes perceptions of climate change? New research since 2010. *WIREs Climate Change*, 7(1), 125–134.
Wilson, J. Q. (1980). *The politics of regulation*. Basic Books.
Zaalberg, R., Midden, C., Meijnders, A., & McCalley, T. (2009). Prevention, adaptation, and threat denial: Flooding experiences in The Netherlands. *Risk Analysis: An International Journal*, 29(12), 1759–1778.
Żuk, P., & Szulecki, K. (2020). Unpacking the right-populist threat to climate action: Poland's pro-governmental media on energy transition and climate change. *Energy Research & Social Science*, 66, 101485.